HANDBOOK OF

Complementary and Alternative Therapies in Mental Health

EDITED BY

Scott Shannon

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Contributors

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Philip Bailey, MD (401), Private practice of Homeopathy, Palmyra, Western Australia 6 157

Daniel J. Benor, **MD** (249), Editor, *International Journal of Healing and Caring* — On Line, Medford, New Jersey 08055-9239

J. Ramita Bonadonna, PhD, RN, **CS** (231), College of Nursing, Medical University of South Carolina, Charleston, South Carolina 29425

Jim Brooks, MD (453), Real World Community Mental Health Center, Fairfield, Iowa 52556; Maharishi Vedic Medicine, The Raj, Fairfield, Iowa 52556

Hyla Cass, MD (377), Department of Psychiatry, UCLA School of Medicine, Los Angeles, California 90095

Jerry Cott, PhD (377), PsychoFarmacology Consulting Services, College Park, Maryland 20740-4001

Raphael d'Angelo, **MD** (71), Private practice, Aurora, Colorado 80047

John Diamond, MD (517), The Institute for Music and Life Enhancement, South Salem, New York 10590

Mark Fallon-Cyr, MD (331), Alpine Clinic, Durango, Colorado 8 130 1

Maureen Fallon-Cyr, LCSW (331), Private practice, Durango, Colorado 81301

John Graham-Pole, MD (475), Department of Pediatric Hematology/Oncology, University of Florida, Gainesville, Florida 326 10-0296

Phyllis Kosminsky, PhD (309), The Center for Hope, Darien, Connecticut 06820

James Lake, MD (183), Private practice, Pacific Grove, California 93950; Community Hospital of the Monterey Peninsula, Pacific Grove, California 93950; Department of Psychiatry, Stanford University Hospital, Stanford, California 94305

R. Paul Lee, DO, FAAO (45), The Osteopathic Center of the Four Comers, P.C, Durango, Colorado 8 1301

Eric Leskowitz, MD (269), Pain Management Program, Spaulding Rehabilitation Hospital; Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts 02 114

Keith G. Lowenstein, MD (159), The Center for Human Holistics, Portland, Oregon 97225

Donald Moss, PhD (135), West Michigan Behavioral Health Services, LC, Grand Haven, Michigan 494 17; Saybrook Graduate School, San Francisco, California 94133

John M. Motl, MD (431), Private practice, Fort Collins, Colorado 80525

Jessica Pearson, MA (309), Ferkauf Graduate School of Psychology, Yeshiva University, Bronx, New York 10461

Janet E. Settle, MD (93, 115), Private practice of Holistic Psychiatry, Denver, Colorado 80203

Max Schupbach, PhD (355), Process Work Center, Portland, Oregon 97210

Scott Shannon, MD (3, 21, 541), Medical Director, McKee Center for Holistic Medicine, Banner Health System, Loveland, Colorado 80538

Barry A. Sultanoff, MD (209, 497), Private practice, Healing Matters, Kensington, Maryland 20895

Jerry Wyker, MD (287), Private practice, Holistic Healing Center, Camel, California 93923

William M. Zangwill, PhD (309), EMDR Institute, New York, New York 10025

Preface

This book grew out of a 3-day workshop which I presented previously to mental health professionals. That program intended to meet the burgeoning need for more professional knowledge about nonmainstream approaches in mental health. In part, this need has been fueled by the huge consumer-driven trend toward these treatments over the last 10 years. While that workshop reflected my personal philosophy and experience after 25 years in this field, this book gives me the opportunity to share with you a wide variety of other professionals' expertise. This text aims to provide you with cutting edge information from many diverse areas of alternative, complementary, and innovative clinical practice in the area of mental health.

The purpose of this work is threefold:

1. To offer practicing clinicians a broader, deeper view of information from areas that, although outside mainstream practice, are having an increasing impact and demand.
2. To offer clinicians a sense of the level of scientific research and experience associated with these fields in the area of mental health.
3. To provide a starting point from which to further explore and possibly incorporate new treatment options into your practice.

This text, while not exhaustive, provides a solid overview from the cutting edge of change in mental health care practice. These topics range from the incredibly ancient (acupuncture is over 3000 years old) to the quite modem (EMDR is less than 20 years old). While covering prominent areas of alternative1 complementary medicine, some of the chapters are more psychotherapeutic ("Process Work" and "Hakomi") or spiritual ("Therapeutic Touch" and "Spiritual Healing"). The overall layout demonstrates the body-mind-spirit premise that permeates this diverse field.

Each individual chapter uses a template for organization to enhance consistency and readability. This general outline breaks each chapter into seven sections. A few chapters, notably the ones on the environment, music, and art, are less structured. This reflects the inherent resistance of these fields to the reductionistic approach. Most chapters have employed a system to compare the level of scientific research support. (This scale is included as the Appendix at the end of the book.)

By its very nature, this type of book is more focused on divisions and separations - different topics, different chapters, and different authors. This runs counter to the current paradigm shift, which most of the work in this text mirrors. Compensating for this, I have authored two chapters that convey a sense of this shift and the shared unspoken philosophy that grounds all of this work.

The final section provides summarization. How do we move toward synthesis of all this material? What impact does this have on our personal philosophy? Following this, I examine how research and its design control our perception of human nature. Finally, this text ends with a look at how the marriage of conventional health care to complementary and alternative therapies can offer us more than either can alone. My goal, and the focus of this text, is to offer you more knowledge, a broader viewpoint, and greater options which enhance your practice and thus the well being of those in your care.

Scott Shannon, MD
Fort Collins, Colorado

Chapter 1

Introduction

The Emerging Paradigm

Scott Shannon, MD

I. INTRODUCTION

Our current clinical approach to mental health issues such as anxiety and depression constantly improves and evolves. Sophisticated research provides more and more data about diagnosis and treatment. Psychotherapists grow increasingly eclectic, moving away from any shared core belief system that once formed the crux of our therapeutic understanding. **A** large variety of practice styles exists, with distinctly different perspectives and solutions. Psychopharmacology grows increasingly sophisticated and complex, with new options elaborated yearly. Yet people continue to suffer and struggle. The practitioner listens to the client; the doctor and patient sit down together. In some ways, nothing has changed for a long, long time.

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II. PSYCHOTHERAPY

Each year, new psychotherapeutic approaches and theories unfold-each driven by a passionate belief in its deeper understanding of the human psyche. These new ideas continue to excite practitioners, who are eager to learn breakthrough techniques. We now have close to *500* psychotherapeutic approaches by some counts, all of which appear to work for some individuals and not for others. Research in psychotherapy has given us some answers, but many questions remain. The complexity of human relationships makes this research extremely difficult. Few summary generalizations pass without significant controversy. No quality outcome studies exist for a large number of clinical problems. Most forms of psychotherapy have had no systematic evaluation at all and very little research has been done on long-term intensive treatments, even though they figure prominently in clinical practice. We do know, however, that certain types of psychotherapy are effective for a few types of clinical patterns. Much like the humans that psychotherapy addresses, we have more variables, questions, and complexities than definite answers.

In an attempt to find more answers, research has explored the common or central factors responsible for the creation of positive change by psychotherapy. The results seem to focus on the *nonspecific* factors-that is, on the intangibles that exist in the relationship and the interpersonal connection with a client-more than on the specific technique employed by a practitioner. Technique seems to matter less than the quality of the relationship.

Jerome Frank, MD, wrote about much of this in his seminal 1961 work, *Persuasion and Healing.* He examined the process of healing as it is applied all over the planet in different settings and cultures. In his view, the therapeutic process distills down to a few factors common to all healing encounters, whether the encounter occurs on Fifth Avenue in New York City or the jungles of Borneo. These common factors include the generation of hope, a shared belief system, and an emotionally charged, confiding relationship.

III. PSYCHOPHARMACOLOGY

Even psychiatry, which has moved further and further down the path of purely biological psychopharmacology, meets Frank's criterion (1961). The impact of belief on medication trials is quite profound. For example, a challenging aspect of experimental design for psychiatric drug trials involves separating the pharmacological impact from the effect of the placebo response, which can account for at least **30%,** and up to as much as **75%,** of

the total response observed (Benson, 1996). In fact, this is why trials are placebo-controlled in psychosomatic research. If this occurs in very controlled research, why could it not be even more true of a variable in the uncontrolled reality of day-to-day practice? Even schizophrenia, which most view as a biologically mediated problem, exhibits placebo response rates of up to 50% (Manschfeck, 2001).

Andrew Weil, MD, and Herbert Benson, MD, two physicians coming from very different perspectives, have thoughtfully explored the impact of placebos and belief in the practice of medicine (Benson, 1996; Manschfeck, 2001; Weil, 1995). Benson (1996) identified three components to the placebo response (or, as he termed it, ***remembered*** *wellness):*

- Belief and expectancy on the part of the patient
- Belief and expectancy on the part of the caregiver
- Belief and expectancy generated by the relationship between the patient and caregiver

Weil (1995) urged us to accept and amplify the placebo response, not avoid and criticize it. The power of our mind to heal us or keep us ill cannot be ignored even from the most biochemical of perspectives.

The power of this biochemistry cannot be ignored either. Psychiatric science holds powerful tools of increasing precision and safety. Medications continue to evolve that can document proven statistical success for many psychiatric disorders. We now have numerous effective antidepressants that are not lethal in overdose. As our understanding of postsynaptic receptors and neurotransmitter systems in the human brain evolves, so does the pharmacology to induce change at this level. All of this biomolecular technology has brought psychiatry to near parity in the medical model.

However, psychiatry still lacks the precise anatomical model that makes a field like surgery so clear and concrete. We have a variety of conflicting and confusing models for depression (the serotonin theory, the norepinephrine theory, the monoamine theory, etc.). Our understanding of the fundamental basis for schizophrenia remains fairly clouded in spite of enormous research and data. Even though obsessive compulsive disorder (OCD) looks to be biologically mediated, the most severe and genetically mediated forms (juvenile onset) typically respond only partially to selective serotonin reuptake inhibitors (SSRIs) intervention (Thomsen & Keckman, 2000). In addition, behavioral approaches in OCD such as exposure and response prevention (ERP) appear to have the same response rate as initial pharmacotherapy (Koran & Sexena, 2000). Even more confusing for this extremely biologically mediated problem is the fact that from 20 to 30% of children with severe OCD spontaneously and completely recover (Leonard ***et*** al., 1993). How do we integrate

all of this into a strictly neurological understanding of OCD? A strictly biological/neurological model does not fit exactly with the data and knowledge base in psychiatry.

Individual response to any specific agent remains quite unpredictable in spite of broad statistical predictability. Even the best responses to pharmacological interventions often fade over time. We have many powerful tools for use on a system (the human brain) that we only partially understand. This is both the blessing and the curse of psychiatry.

Both the psychotherapeutic model and the psychopharmacological model exhibit a number of factors in common. Practitioners in both fields recognize the importance and validity of the other. In fact, some psychologists are now actively fighting for the legal right to prescribe psychiatric medications. Frequently, psychiatrists find themselves fighting with insurance companies for fair reimbursement of their psychotherapeutic skills, not just the use of medications. Obviously, both fields address many of the same issues and attempt to treat the same problems, often in the same people. The fields overlap; yet at times they are in conflict.

IV. A META-MODEL

Which model is correct? Which represents the truth? Most current research points toward a synergy of these two models. For example, chronically depressed patients who receive both therapy and medication seem to do significantly better in the end. This view was reiterated in a major study published in the ***New*** England Journal of Medicine (Keller ***et*** al., 2000). Are we not like the five blind men who examined a different part of the elephant, each with an accurate but quite divergent description? If both models are correct and relevant, then we need a meta-model that can put both the psychopharmacological and the psychotherapeutic models into proper context.

As we step back and try to gain perspective, what seems clear is that neither current model has a monopoly on success. Some individuals who have failed to respond to the intelligent and creative use of pharmacology, even after years of effort, find genuine relief in a psychological or even spiritual approach. Likewise, people who continue to suffer after years of varied and effortful therapy, often respond remarkably well to a simple biochemical intervention. How do we make sense of this?

People continually find healing of mental/emotional disorders from outside either of these models. For example, research documents that the effective treatment of depression has been found in herbs (Cass, Chapter 18),

acupuncture (Motl, Chapter 20), light therapy (Shafii, 1990; Terman, 1999), exercise (Blumenthal, 2000; Matinsen *et* ***al.,*** 1985), negative ions (Finley, 1995), meditation, and nutritional compounds (Settle, Chapter 6). These treatments fall outside our current models and, in fact, challenge them. If we recognize and accept the limitations of our current research style (more on this later) and the lack of broader questioning on this topic, then we can see that mental/emotional issues are affected by a wider range of influences than either of our two current models allow. For example, many individuals find healing of mental/emotional disorders from factors that lie well outside the psychotherapeutic or psychopharmacological models. Whether it is a new pet, a supportive friendship, an exciting romance, a pleasurable hobby, a spiritual deepening, a selfless service, a life-threatening illness, or an inexplicable personal epiphany, people come upon healing via a multitude of paths and methods. In addition, if we step outside our own narrow cultural view, we can also see that cross-cultural approaches to healing offer relief to many and have for eons.

Some of these methods step outside the box that Jerome Frank (1961) outlined for us 40 years ago. The examples listed above do not involve healers; there is no placebo response or suggestion involved. In some ways, this challenges our profession, perhaps creating defensiveness or resistance or even eliciting a puffed-up, "they can't heal without me" response. Yet when we look honestly at our lives and our experiences, professional healing stands as just one path of many to healing and growth.

Simply put, people are more complex than any current model of healing fully allows. Technically, neither the psychotherapeutic nor the psychopharmacological model explains the impact of the other. In some ways, they are mutually exclusive. However, if we can see that people function simultaneously on many different, interconnected levels (physical/biological, mental/emotional, and spiritual, for example), we can begin to grasp a solution to this modem dilemma. Neither model is wrong. They are merely reasonable models for an isolated, fragmentary view of human nature.

Our physical/biochemical nature is real and can be affected by medication. Our mental/emotional self exists and it can be affected by therapy. Beyond this, we have a spiritual existence (honored by every major historical culture on earth) that can also affect change and illness. Significant documentation from Freud onward honors the ability of the mind to affect physical health and/or create symptoms. An ever-increasing number of studies give solid evidence that spiritual belief (Matthews, 1998) and even social connectedness (Ornish, 1998) can improve physical health. A new paradigm or model that allows for the existence of our body-mind-spirit and their inherent interconnectedness opens us to a broader vision of human nature. This also fits better

with our existing data. This text seeks to elaborate on this new model and to share how a wide array of modalities, both ancient and modern, can affect mental health issues.

V. KNOWLEDGE AND WISDOM

Before we can examine this new model clearly, we need to step back and take a closer look at the tools we can employ to sort out validity. Knowledge involves the accumulation of data. We have a clear scientific process in place that isolates variables and collects data. This process emphasizes the magnification of details and the loss of context. The scientific process has brought clarity of detail and enormous amounts of knowledge. Knowledge is a linear approach that applies the left hemisphere style of cognition, which we often call logic.

Wisdom involves a nonlinear process in which we apply context to our knowledge. It involves the big picture, while de-emphasizing small details. Knowledge tells us which chemotherapeutic agent is most effective against a specific cancer. Wisdom tells us when to stop treatment. Knowledge tells us which DSM-IV diagnosis an individual has. Wisdom tells us when to wait in silence during a conversation with a client. Wisdom comes from a more intuitive style of information processing that mirrors the mode of the right hemisphere.

A strong emphasis on the application of logic has created the trend toward reductionism and fragmentation that modern science has taken. This 300- or 400-year trend toward extreme reductionism and fragmentation has given us much in the way of science and technology. The gifts are all around us: cell phones with Web access, the human genome, satellite navigational systems, evolving personal palm computers, and so on. With these innovations comes a mountain of knowledge, which grows overwhelming and doubles every 3 years.

We all can appreciate these gifts, but do we comprehend their real cost to us? First, we have lost a sense of perspective and balance about our world and our self in proportion to how immersed we are in this mound of knowledge. Wisdom is a polar opposite of knowledge. The two complement and balance each other. Much of our current crisis in the world of health care flows out of the extreme imbalance that we now experience. We have given up wisdom for knowledge. The price is a loss of connection, a loss of context, and the vacuum of real guiding wisdom.

This loss of wisdom particularly affects those issues that are least amenable to the dissection, isolation, reductionism, and fragmentation of modern science. As we move from chemistry to biology to psychology to social

health to theology/spirituality, we follow a steady progression from the reducible to the irreducible. The importance of wisdom in each field grows as we move along this path. How do we find balance and context for the wise application of our current substantial knowledge regarding mental health issues?

VI. THE EMERGING PARADIGM

Our current scientific view of human nature does not allow for body-mind-spirit. The existing view is the Cartesian principle of body-mind and body-spirit separation. A significant amount of data continues to accumulate, which challenges this aging perspective. What will the new view look like? Where are we in this process of change? We know that knowledge and data can change belief systems. This comes as no surprise. The surprise, however, comes when we discover that this change occurs slowly, no matter how solid and credible the information.

Clearly, this is true in traditional psychotherapy where emotional issues can create an inertia that insight must overcome in order for the process of change to occur. People cling to beliefs for both comfort and safety. Often, change occurs for an individual much more slowly than seems reasonable from an independent perspective.

Science mirrors this same process. Clearly, new data alter specific scientific theories. What happens when this is not merely an isolated theory but the much broader conceptual perspective from which all the individual theories flow? When the data or information falls outside the broader belief system, opening to a new insight can begin to create change; clinging to the old perspective can actually slow down the process of scientific change.

This larger or systemic belief can be called a paradigm. It is the broadest worldview of science from which we operate. Like the personal beliefs we explore in psychotherapy, our scientific paradigm is often unspoken, typically unrecognized, and usually unchallenged. In science, our paradigm governs not only which theories we create and test, but also, and more important, which ones we don't challenge. These broad assumptions channel our view of the world and how we search for and categorize the information that we find as well as the data that we dismiss or ignore. For example, the normal process of science often suppresses fundamental novelties because they undermine its basic intent and seem irrelevant (Kuhn, 1962).

If our scientific theories and the data we collect operated like a computer-based program, change would be much more fluid. However, profound scientific change is a slow, episodic, and human process. Thomas Kuhn, the

philosopher of science, wrote of this in his 1962 book, *The Structure of Scientific Revolutions.* In this book, he documents that, in spite of revolutionary discoveries or concepts, the change in the larger belief system takes generational time. Scientific understanding and our belief systems become quite institutionalized. Change threatens the status quo and the established hierarchy. The institutions resist change; the older generation doubts the new concepts and the validity of the data. The process of a true scientific revolution takes a number of generations to fully unfold (Kuhn, 1962). "That professionalism leads ... to an immense restriction of the scientists' vision and to a considerable resistance to paradigm change. The science has become increasingly rigid" (p. 64).

A paradigm changes slowly over time. Einstein's new concepts of relativity were espoused at the turn of the last century. Evidence for his ideas continued to build for many years. Now, a century later, they are well accepted in the physics community, but this was not the case in the early part of the twentieth century. However, the broader ramifications of his new paradigm continue to percolate through science. Most of us still instinctively clutch more to a Newtonian view of the world. Einstein's view of the world does not negate Newton's view. It merely expands upon it to explain other things.

In a similar manner, most new paradigms do not invalidate the older paradigm; they merely supersede it with a broader, more inclusive, explanation. When a new paradigm completely invalidates the old one, extreme emotions often erupt, as Galileo discovered when he rebutted the Copernican view of the world-that the earth was the center of the solar system. The reaction of scientists when their paradigm is challenged mimics an emotional and spiritual affront. This becomes a paradigm crisis, which precedes a paradigm shift.

VII. THE NEW PARADIGM

Three concepts, shared early in the last century, form the roots of our current paradigm shift.

- Albert Einstein explained that energy and matter are merely different forms of the same thing.
- Sigmund Freud noted that the mind can influence the body and, at times, can lie completely outside our conscious awareness.
- C. G. Jung documented the spiritual core that exists in our psyches and strives to find meaning and balance in our lives.

Over time, these three concepts percolated through the scientific communities and then penetrated the awareness of the general public. By the 1960s, these three concepts came together with other new concepts to create a consciousness revolution-a dramatic rejection of the old cultural perspective. In some manner, most of the older generation initially resisted these ideas. Many of the core principles of the emerging paradigm were voiced clearly during the consciousness revolution of the 1960s.

- We have many levels of awareness. It is important to explore and validate each of them.
- " The physical body is composed of energy. It is capable of and includes much more than we now know.
- We must follow our unique inner spiritual path, not just a traditional religious institution, to find meaning in our lives.
- The body has the power to heal itself-and simpler, more natural methods of healing may be better.
- Our individual beliefs are valuable and can be powerful tools for creating personal change.
- The mind is incredibly powerful. We can use it to impact our body, our health, and our well-being.
- We all exist in a vast matrix of interconnections, a web of life, which encompasses our entire environment.
- Each of us is fully unique and must be respected as an individual in our full autonomy.

The areas that were most impacted by this new paradigm were those which dealt most broadly with the higher dimensions of human functioning, in particular, mental health care and spirituality. Psychotherapy in particular saw a large influx of new ideas based on this emerging worldview. This was called the human potential movement. These changes have continued to evolve as the young people of the 1960s have aged.

The decision makers are now baby boomers who have grown up. In the last 10 years or so, we are witnessing an interesting phenomenon: the general public is starting to transform health care from the outside. In 1993 David Eisenberg, MD, of Harvard documented in the New England Journal of Medicine that almost one-third of Americans were using complementary1 alternative medicine (CAM) and spending nearly $13 billion in out-of-pocket expenses (Eisenberg, Kessler, & Foster, 1993). Over the past few years, this trend has continued unabated. Eisenberg shared that by 1998 these figures had grown to 42% in utilization and $30 billion in expenditures. CAM visits and spending are accelerating at a phenomenal pace. Visits to CAM practitioners

now exceed the visits to primary care physicians by almost 40% (Eisenberg, Davis, and Ettner, *et al,* 1998).

This consumer-driven trend has started to transform health care. Noticing this level of consumer interest, most major hospital systems, which are fighting for market share and survival, are addressing this demand. Now, nearly every major health care system, including the National Institute of Health (NIH), has a center for complementary medicine or some project in development. The leaders in this trend come from the top echelon of our health care institutions: Harvard, Columbia, Duke, and Stanford. The University of Arizona, College of Medicine, under the leadership of Andrew Weil, MD, now has an Integrative Medicine Fellowship Program. The graduates of this program are mainly seeding other innovative academic models that address the exploding public demand and utilization for this type of health care. Holistic medicine established board certification in the year 2000, signaling further integration into mainstream medicine. Consumers have driven this trend by choosing CAM services and embracing the perspectives of the new paradigm.

In 1998, John Astin of Stanford published an article in the *Journal of the American Medical Association* in which he explored why people are turning to complementary medicine (Astin, 1998). His survey illustrates that this trend is not a reaction to the cost or danger of modern medicine, nor is it a push for more personal autonomy. Rather, it is a self-directed movement toward an approach to health care that matches our changing internal belief system. People choose CAM services because it mirrors their own philosophy of health. The people using CAM are typically well-educated and affluent, harbingers that the rest of the United States will soon follow.

We have an aging scientific paradigm increasingly questioned by well-educated consumers and dissatisfied practitioners. This old paradigm is an extension of the movement toward scientific reductionism and fragmentation that has been evident over the past 300 years. Most of the profound new data regarding the power of the mind and spirit to alter well-being have been relatively ignored by modern medicine, because the old paradigm has no place for it. The following is a list of biases inherent in our established model of health care that reflects the old paradigm.

- The body is a physical biochemical machine and can be treated in isolation from emotional, mental, social, and spiritual issues.
- The practitioner has more knowledge and directs treatment for the patient.
- Lifestyle issues and stressors are a minor factor in the development of illness.
- We understand illness much better than health, so this becomes our costly focus of technology, especially at the end of life.

- Invasive treatments have significant risk, but this is outweighed by their statistical value at reducing symptoms.
- We can find a specific biochemical agent to reduce every type of symptom or symptom pattern.
- Nonmedical and nonsurgical approaches have limited value and validity. They are often marginalized.
- Cost is secondary; technology is king. The practitioners who use the most technology receive the most remuneration.
- The more specialized and narrow the practice, the more status and reimbursement is gained by the practitioner.

The status quo that is held in psychology, social work, and counseling is less obvious. In effect, although the wide variety of theories and techniques has presented many options, it also has created a lack of clarity and cohesion. This view has made it easier for the current health care paradigm to marginalize mental, emotional, and social treatments. Mostly, these treatments are fragmented from the traditional health care delivery system. Nonpsychiatric mental health holds a peculiar role. It stands in a transition between one paradigm and another.

VIII. NONLOCAL MIND

Larry Dossey, MD, in his work Reinventing Medicine (1999), described three eras of health care. The first started with the elaboration of basic medical science in the late 1800s. Dossey called this phase the era of mechanical medicine. In this model, mental, emotional, and spiritual concerns were dismissed. Dossey called the second era mind-body medicine. In this era (which began in the post-World War II time frame), the mind increasingly became a factor in treatments such as counseling, relaxation, biofeedback, and alternative therapies. Dossey sees us now entering the third era-nonlocal medicine. The mind becomes a factor not just in healing with the single person but between people. Healing moves beyond the individual to a larger context.

Dossey viewed the documented value of prayer (1993) and other spiritual healing techniques as generated by the power of the mind to have distant effect on the health of others. He elaborated on how the physics of quantum mechanics makes this possible (1982). Certainly, nothing in our current paradigm of health care allows this nonlocal healing to be a possibility. However, many of the modalities elaborated in this text come from ancient traditions that have long held this view. With the concepts of nonlocal mind, the intention, attitude, and openness of the practitioner become critical elements.

Not surprisingly, these elements were also recognized by Jerome Frank in his previously mentioned study of healing, *Persuasion and Healing* (1961). He saw the same pattern but attributed the positive impact to suggestion, which was the best solution available to him. Current research points away from pure suggestion and toward a nonlocal effect (Dossey, 1993). Nonlocal effects are well-documented in modern physics with the spin of electrons separated at a distance (Zukav, 1979). The concept of the nonlocal mind joins modern physics and current clinical research in a new vision of human potential.

Era III medicine embraces the concepts of modem physics and the most ancient of healing traditions on our planet. It fully accepts the models of spiritual healing and medical intuition outlined in this book. The term *spirit,* used as one foundation of holistic medicine, could also be defined as the nonlocal mind. This model challenges us conceptually by limiting our ability to cling to a Newtonian view of reality. It does not invalidate our current health care system; it merely places it in a larger context. In my view, Era II health care, mind-body medicine, describes the overlap between the old and new paradigms. It is this period of emergence and transition that we now occupy. We are confronted with the conceptual extremes of advanced psychopharmacology on one hand and therapeutic touch on the other. Can we embrace both behavior modification and Hakomi?

IX. RESEARCH AND VALIDITY

The solution to this enormous challenge grows from a model of inclusion, not exclusion. How can we sort through these models rationally and even-handedly to find a core of validity? The scientific method comes to us as a gift from the old paradigm. Our newest challenge is to apply this wonderful tool in a manner that does not reflect the limitations and inherent biases of the old paradigm. We need to sort out what is valid, and what the best approach for doing this is while gaining a broader view of our nature and of healing. How does research into the effectiveness of healing change with the concept of a nonlocal mind?

The broader our view of human nature, the wider our scope of inquiry must be. For example, *in vitro* biochemical medical research reflects the biases of the old paradigm. We need a research model that honors our holism and our vast interconnections. How do we cast such a large net? Clearly we know how difficult it is to do sophisticated research on psychotherapy variables. In the new paradigm view, the variables become harder to isolate and assess. Health outcome studies (which employ a more naturalistic format) represent a mode of inquiry and one possible solution to this dilemma. We

must also be aware that this new paradigm challenges the conceptual framework we use to evaluate what is real and valid. For example, can we really isolate human variables in a being that is so complex and interconnected? The questions that we have not asked and the data that we have not examined must also speak more loudly. This topic is reconsidered in the concluding chapter, "Synthesis."

X. DATA AND RISK

Clearly, we need cogent research and documentation of effectiveness for *all* of our health care techniques-old and new. Integrative medicine respects this need. The studies are growing. Some of the modalities elaborated in this text have a solid and growing research data bank (meditation, biofeedback, acupuncture, homeopathy, and herbal medicine), and some more narrow areas have strong preliminary data (EMDR, qigong, omega 3 oils, and prayer). Many of the areas are difficult to scrutinize by the placebo-controlled, double-blind mindset of our current paradigm (music, creative arts, the environment, medical intuition, process work, and Hakomi). As expected, in the field of complementary and alternative medicine, the data for mental health issues lack the great sophistication of the purely medical issues (given the aforementioned complexities). As the prevailing perspective opens to a new conceptual base, we will adapt and find new methods to evaluate these more complex and less divisible models of human healing.

One issue that our current model does not acknowledge or address well is the issue of risk. When a discussion of herbal medicine arises in a medical setting, the inevitable skeptic often raises the issue of safety. Herbal medicines and supplements do have a risk. The American public generally has no primary care physician guidance on this topic in spite of huge demand and utilization (Eisenberg, Davis, & Ettner, *et al,* 1998; Eisenberg, Kessler, & Foster, 1993). Partially because of this lack of guidance, the extreme overuse or inappropriate application of herbal remedies can and does occur. In addition, we are beginning to realize that herb-drug interactions (Ginkgo and Coumadin, for example) can be significant. A few herbs are outright dangerous for human use. Overall, herbs harm some people, and a few documented deaths occur each year (McGuffin, 1997). Herbs and nutritional supplements possess some inherent risk, especially when used without the supervision of a health care professional.

In addition, physicians often raise a concern about patients using CAM modalities to the exclusion of medical care. However, numerous studies indicate that people who use CAM are more likely than the general population to seek

medical care. In Eisenberg's study, not one person was using CAM for the treatment of cancer without the simultaneous involvement of the conventional medical community (Eisenberg, Kessler, & Foster, 1993). This is why the term "complementary" evolved from "alternative." The data simply do not support the concern that appropriate medical care is sacrificed by CAM utilization.

To keep these concerns in proper context, however, we must compare and contrast CAM utilization with the risk of prescription medications. According to a recent report in the *Journal of the American Medical Association* by Dr. Barbara Starfield of Johns Hopkins University (2000), adverse drug reactions to correctly prescribed medications kill approximately 106,000 people annually in the United States. Medication errors kill another 7000. Unnecessary surgery results in the death of about 12,000 people per year. Errors in hospital care cause about 27,000 deaths each year. Starfield's study documents that there are at least 225,000 deaths each year from iatrogenic (physician-based) causes. This makes medication reactions the sixth leading cause of death in the United States, and iatrogenic reactions are the third leading cause of death, after heart disease and cancer. This is in spite of the fact that Americans made one and a half times as many visits to CAM practitioners as they did to their primary care physicians in 1997 (Eisenberg *et al,* 1998). Where did we lose sight of "primum non nocere," Hippocrates' admonition, to first of all, do no harm?

It is news when someone dies from an herbal medicine. Fortunately, those deaths are rare. The most dangerous herb seems to be ephedra, which is being marketed in huge numbers as a stimulant/weight loss product. One source attributes 70 deaths to this product. It is difficult to track deaths and adverse events from herbs in the United States, where there is no sophisticated monitoring system. However, in Europe, such a monitoring system is in place. In a recent year, 8263 adverse events from herbs were reported. Prescription drugs created more than 2 million adverse reports for the same population (Upton, 1998). Herbal medicine is used much more widely in Europe than in the United States. Every serious inquiry into the safety of CAM modalities has concluded that, given the level of supervision and popularity of these treatments, they are extremely safe and low risk. If herbs caused 1/100th of the fatalities that we routinely document from prescription medications, outrage would quickly render them illegal. Somehow, morbidity and mortality from conventional medicine has become institutionalized and somewhat ignored.

All of the modalities included in this book combined cause fewer than 100 untoward deaths documented each year. If herbal and nutritional supplements are excluded, the risk is negligible. Does mainstream medicine really want to debate this issue? These modalities are safe, gentle, and possess statistically

less potential for harm than an airplane flight or even climbing a ladder. Risk to the consumer using CAM modalities appears to be a much less significant issue than the risk in conventional medical care.

XI. RISK AND EFFECTIVENESS

A more pressing issue would be how to factor the risk/adverse effects into the research and documentation of effectiveness. Clearly, prescription drugs and surgery represent powerful tools for impacting illness. With power comes risk. Should not our research document total positive potential by some compilation of positive benefits and adverse events? How do we factor in all those people who drop out of a drug study because they cannot tolerate the treatment? How do we factor in the side effects of prescription medicines that people just live with? How does drug-induced lethargy or impotence affect one's quality of life? If one stands a 1 in 100,000 chance of dying from a prescription medication, how does one factor this risk into the benefit one might personally derive? How does that one person who dies factor in? If we used research tools that factored both positive and negative events (weighted in some manner), the documented therapeutic differential between prescription medications and CAM approaches would narrow rather considerably. Risk and total negative effect should be weighed in any consideration of therapeutic benefit.

Although physicians (this author included) prescribe conventional medications, when indicated, nearly every day and would be hard pressed to give up this valuable tool, the health care community would benefit from being more circumspect about the potential dangers of these conventional treatments and by continuing the search for safer options that expand the health care palette.

XII. SUMMARY

The emerging new paradigm does not reject the old one; it merely seeks to expand it. A broader vision of humanity and human wellness allows current health care approaches to be placed into proper context. In this way, we can use a broader wisdom to guide us in the current knowledge that we hold. Wisdom guides knowledge. Without sound knowledge, wisdom is empty, just as knowledge can be misdirected without guiding wisdom.

Currently, we are witnessing the process of integration as the holistic paradigm begins to shift health care. The terms used to describe this new style of health care have gone through a curious evolution. In the early 1970s, it was

termed *holistic health.* In the late 1970s and early 1980s, it was called *alternative medicine.* By the late 1980s, the British term *complementary medicine* was coming to the forefront. By the early 1990s, another term, *integrative medicine,* became popularized by Andrew Weil, MD. Three of these terms *(complementary, alternative, and integrative)* represent the progressive relationship of this new paradigm to the current health care system. Only one term is actually descriptive of the new model: *holistic* (and its root *holism). Holism* becomes our topic of consideration in Chapter 2.

XIII. RESOURCES

American Holistic Medical Association
6728 Old McLean Village Drive
McLean, VA 22 10 1-3906
Telephone: (703)556-9245
Fax: (703)556-8729
Web site: www.holisticmedicine.org

Integrative Medicine Communications
Telephone: (617)641-2300
Fax: (617)641-2301
Web site: www.onemedicine.com

National Institute of Health
National Center for Complementary and Alternative Medicine
P. O. Box 8218
Silver Spring, MD 20907-8218
Telephone: (888)644-6226
Web site: www.nccam.nih.gov

Institute for Noetic Sciences
475 Gate Five Road, Suite 300
Sausalito, CA 94965
Telephone: (415)331-5650

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Chapter 2

Integration and Holism

Scott Shannon, MD

The true state of affairs in the material world is wholeness. If we are fragmented, we must blame it on ourselves.

Physicist David Bohm

I. INTEGRATION

Both the existing and emerging paradigms have much to offer us in health care. For instance, some of the many strengths of the old paradigm include sound biomolecular scientific process, rapidly expanding precision and technology, a deep base of data/knowledge, and an incredible effectiveness in the care of those with acute, life-threatening illness and trauma. The new paradigm also brings many gifts-a deeper understanding of the spiritual nature of humankind, the power of belief and intention, the importance of relationship1 connection, our ability to self-heal and self-guide, a deeper understanding of the complexities of chronic disease, and the wide variety of safer approaches

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to healing. Both practitioners and consumers can benefit from the judicious marriage of these two systems with their inherent strengths.

Typically, as two systems blend, each gradually adapts to the needs of the other. This is true of our current paradigm shift. For instance, on the one hand complementary and alternative medicine (CAM) increasingly recognizes the need for solid research and more data, while on the other hand conventional/mainstream medicine is beginning to acknowledge the body-mind-spirit interconnection and the value of other approaches, especially in chronic illness. Hospitals around the United States are adding complementary services or centers where these two styles of health care are learning to collaborate.

At this time, the old paradigm of conventional medicine dictates the language needed for mainstream acceptance (data, research, etc.). However, the increasing popularity and lay acceptance of the new paradigm-a more holistic worldview of health care-is driving the whole process toward integration, for health care in any culture is ultimately an applied social science that reflects the belief systems of the people, not the needs of the practitioners. Gradually, the culture and beliefs of the populace begin to transform the application and focus of any health care system. This has been true throughout history across the globe-health care practices mirror the culture and beliefs of the populace.

During the last half of the nineteenth century, homeopathy was a surging force in medicine in the United States. The rising technology and science of the Industrial Revolution, however, ultimately moved Americans away from homeopathy and toward the current system of allopathy, because of the change in cultural values. This shift has not occurred in China, however. Even with its dramatic Westernization over the past 30 years, traditional Chinese medicine/acupuncture continues to be an extremely powerful force in Chinese health care. This has occurred because the Chinese people continue to deeply value and cling to their traditional cultural philosophies. Japan exhibits another example of the powerful effect of cultural philosophies on health care. Although Japanese medicine has the same technology and science as is available in the United States, Japanese culture spends less than half the percentage of GNP (6% vs. 13.4%) on health care. Japanese culture frowns on excessive attention to the individual, which is the exact opposite of the more narcissistic cultural pattern in the United States. (Interestingly, in spite of this difference in medical expenditures, their health outcomes are significantly better.) Health care always reflects the culture.

Over the past four decades, Western culture has dramatically changed its view of health care. As these beliefs and preferences shift, so does health care. Witness the power of the consumer in the evolution of CAM and hospital-based services. Medicine adapts to the demands of the people being served.

Currently, Americans are witnessing the *integrative stage* of this scientific revolution (or evolution). Because conventional/mainstream health care has started to embrace or integrate various elements of CAM, *integrative medicine* is the most exact descriptive term for this intersection of the two paradigms. After years of near total separation, CAM and conventional medicine have been brought to the altar by the American people.

Typically, the elements of CAM, which are accepted first by mainstream medicine, originate from the approaches most similar in style to mainstream medicine. Herbal medicine, for example, is quickly being integrated because it is safe, it has a fair research foundation, and it can be used in an allopathic manner (the conventional system: literally against disease) to treat by targeting remedies to a specific symptom. In many ways, herbal medicine forms the historical roots of allopathic/pharmacological medicine. Nutritional supplements, which are finding rapid acceptance, are another example of the symptomatic approach to treatment favored by conventional medicine. Familiarity of style seems to factor prominently in the speed of integration.

Meditation, on the other hand, is an inexpensive, safe, and empowering method for addressing many physical and mental conditions. The research base for this approach is broad and powerful. Meditation as a healing technique, however, does not fit very well into the old paradigm. Its acceptance and implementation lag far behind that of herbal and nutritional supplements. Spiritual approaches are even more foreign. We are just beginning to document their effectiveness. The application of spiritual approaches remains in its clinical infancy, mainly because it is the most conceptually challenging to the conventional medical mind-set (physical interventions and local effects only). The other approaches outlined in this book that are most different from the conventional health care mind-set (i.e., concrete, external, physical interventions of a medication/surgical nature) will find the slowest integration, despite solid documentation of efficacy and safety. Ultimately, familiarity of style ranks at least as high as research base as a factor dictating the speed of integration into conventional medicine.

This is another reason why the practice of psychotherapy has remained relatively nonintegrated with mainstream medicine. Mental health care has always been somewhat of an illegitimate stepchild in the broad health care arena. Psychotherapy and mental illness have never been a comfortable fit with medical/surgical medicine. Psychiatric units are often *off* campus or quite segregated. Only rarely are mental health care programs well integrated into other aspects of health care, even if there is proximate physical location. Under managed care, mental health benefits were the first to be squeezed. Over the past 10 years, mental health benefits have experienced a much more negative impact from managed care oversight than medicallsurgical services (Mechanic, 1998).

Psychotherapy lies much closer to CAM than to conventional health care in its practice and philosophy. In fact, the leading peer-reviewed journal in CAM, *Alternative Therapies in Health and Medicine* (ATHM) (Larry Dossey, MD, editor) lists psychotherapy as an alternative modality. Because of the complexity of psychotherapy and human interactions, broad, solid research data have been much more difficult to achieve than in biomolecular science (Kaplan & Sadock, 1985). This is the result of the multidimensional nature of human interactions and change.

The movement from *alternative* to *complementary* to *integrative* accurately reflects the chronological stages that have occurred within the paradigm shift in health care. As mentioned, this shift is both consumer driven and generationally mediated. That is, over time the populace increasingly holds the new worldview, with the younger and better educated holding it more strongly (Eisenberg *et al*, 1993, 1998). This mirrors the pattern outlined by Kuhn in his seminal text, *The Structure of Scientific Revolutions* (1962). The least likely to hold this view are older (especially in institutions where status quo is a priority) or less educated (those least likely to personally explore and challenge intellectually the prevailing conventional institutions of health care). Thus, time and learning become agents of evolutionary change.

Integration as a process leads to transformation. In 20 to 40 years, health care will be quite different in style and form. This is the predictable course history of a paradigm shift. The period of transformation will end when the prevailing mainstream practice of health care more accurately reflects the new paradigm now increasingly held by the general public. From that point on, the evolution of health care will become just the further elaboration of the new paradigm as guided by knowledge, research, wisdom, and observation.

If *integration* reflects our current stage in the process of paradigm shift, then *holism* represents our best expression of this new paradigm. The holistic paradigm is by definition an evolving model. The discoveries of Freud, Jung, and Einstein formed the heart of our current version of this model. However, many of the major ancient cultures understood the essence of this perspective better than our modem civilization does now. These ancient traditions of health care also reflected a *holistic* model. We only have to explore the traditions of acupuncture, Ayurveda, or Native American medicine to see holistic views of human nature, which see body-mind-spirit as one and our web of life as inseparable. The Aborigines of Australia have held a view of the spiritual primacy of our reality for tens of thousands of years. Traditional systems embrace the ability of the body to heal and the many dimensions of our human nature. Holism reflects a wisdom that is both ancient and current.

For several thousand years, traditional Chinese medicine has employed a model that emphasizes the natural harmony of the physical body and its

interconnectedness with both emotions and spirit. Their health care system was an accurate reflection of the culture it served. In texts that are almost 2000 years old, this model emphasized both prevention of disease (disharmony) and the innate healing power of the body. We have much to learn from these ancient approaches, both in practice and in philosophy.

The best model of holism comes from a dialogue between the new ideas of the twentieth century and the ancient traditions. Many of the ideas overlap. Sometimes these *new* discoveries merely document age-old wisdom. When reduced to its simplest form, the implications of the discoveries of Einstein, Jung, or Freud would fit well with the traditional Aboriginal mind-set: Our body (one of many interconnected levels) consists of both energy and matter. We also contain a spiritual and mental existence that can direct and alter our physical existence. As one specific example, the prehistoric Aboriginal concept of dreamtime seems very compatible with the modern concept of the dream body found in Chapter 17, "Process Work."

This book seeks to represent a wide spectrum of approaches that fall outside our current mainstream model for addressing mental health issues. These approaches reflect both the innovation and integration of ideas as the new paradigm of holism emerges. All of these models or traditions can be looked upon as variations on a central theme of holism.

As we examine the principles that form the foundation of both ancient traditions and modem innovation, we find many similarities. The emerging paradigm of holism joins this broad span of time and technique. The core principles of holism represent a tie to our past and a path to the future of health care. Although new to Western culture, they are not *modern.*

We can gain much from studying these other models individually. However, it is critical that we grasp the deeper, underlying philosophy and fundamental pattern of all this change if we are to understand this process. The next section elaborates this model of holism in more depth. Each ensuing chapter will tie together more easily when viewed in the light of holism. Some models presented in this book are broad. Some are quite narrow. However, they share many core concepts. As you read, look through and beyond the differences for a glimpse of commonalities. In these shared elements, core features of human nature join.

II. HOLISM

Holism as a term dates back to the South African philosopher Jan Christian Smuts. He coined the term in 1925 to present a polar extreme to the trend

he observed in biology and science. He witnessed a tendency to fragment, isolate, and reduce living systems to smaller and smaller parts. He posited that *the whole is more than the sum of the individual parts.* Smuts saw that we lose a critical facet of information when we study living organisms out of their systems' context or their individual wholeness. For example, we can study the biochemistry of the isolated cancer cell in a test tube with great detail, but we are left with no understanding regarding how emotions, stress, and belief systems impact its survival in the intact human being.

Holism always takes a systemic approach to understanding. Systems theory guides us by explaining the profound manner in which our interconnections impact our well-being. Individually, we cannot be understood in isolation from our physical environment, our family, our social network, our culture, our religious community, our vocation, etc. While holism incorporates most of the elements of the emerging paradigm, the principles of self-organizing/self-correcting systems also contribute key concepts. Likewise, the study of *interconnected systems,* known as *ecology,* plays a considerable role.

III. HOLISM IN HEALTH CARE

Of all the existing terms for the emerging paradigm, *holism* has the most usefulness. It carries with it the historical weight of more than 75 years of application in the biological sciences as well as a public recognition factor. *Holistic health* is a term that has been used and applied broadly in health care for 30 years. For some, unfortunately, this term can evoke mixed responses based on the varied and vague applications it has encountered in the past. Generally, however, the application of this term has been quite positive and appropriate.

In 1978, a group of pioneering physicians gathered to create a new type of health care organization dedicated to reintroducing into medicine the concepts of holism and spiritual depth. Thus, the *American Holistic Medical Association* (AHMA) was founded (Table I). This organization has not only fostered support for these ideas and for its members, who often suffer persecution or dismissal by mainstream medicine, but it also has produced a wide number of true luminaries in the field of health care. Patch Adams, MD; Deepak Chopra, MD; Larry Dossey, MD; Christine Northrup, MD; Norm Sheally, MD, Ph D; Bernie Siegel, MD; Andrew Weil, MD; and many other visionaries began their rise to prominence as members of this group. Today, we have board certification in holistic medicine, broad medical school interest in this topic, and surging public demand. Holism has become an active force in the transformation of American health care. As a founding member

Table I
Principles of Holistic Medical Practice
American Holistic Medical Association

1. Holistic physicians embrace a variety of safe, effective options in diagnosis and treatment, including: (a) education for lifestyle changes and self-care; (b) complementary approaches; and (c) conventional drugs and surgery.
2. Searching for the underlying causes of disease is preferable to treating symptoms alone.
3. Holistic physicians expend as much effort in establishing what kind of patient has a disease as they do in establishing what kind of disease a patient has.
4. Prevention is preferable to treatment and is usually more cost-effective. The most cost-effective approach evokes the patient's own innate healing capabilities.
5. Illness is viewed as a manifestation of a dysfunction of the whole person, not as an isolated event.
6. A major determinant of healing outcomes is the quality of the relationship established between physician and patient, in which patient autonomy is encouraged.
7. The ideal physician-patient relationship considers the needs, desires, awareness, and insight of the patient as well as those of the physician.
8. Physicians significantly influence patients by their example.
9. Illness, pain, and the dying process can be learning opportunities for patients and physicians.
10. Holistic physicians encourage patients to evoke the healing power of love, hope, humor, and enthusiasm, and to release the toxic consequences of hostility, shame, greed, depression, and prolonged fear, anger, and grief.
11. Unconditional love is life's most powerful medicine. Physicians strive to adopt an attitude of unconditional love for patients, themselves, and other practitioners.
12. Optimal health is much more than the absence of sickness. It is the conscious pursuit of the highest qualities of the physical, environmental, emotional, spiritual, and social aspects of the human experience.

of this group, I have observed a pervasive shift in health care as medicine has slowly opened to these concepts of holism.

This section explores the following four major principles of holism as they relate to mental health and medicine:

- Body-mind-spirit interconnectedness
- Balance and guidance
- The web of life
- Wholeness-the move to completion

IV. BODY-MIND-SPIRIT INTERCONNECTEDNESS

We do not understand our self very well when we separate our body from our mind and spirit. In the holistic view, body-mind-spirit is seen as interconnected

and interactive. Our spiritual beliefs impact our physical health, and our physical habits, in turn, affect our spiritual clarity. Additionally, our mental and emotional well-being alters our physical health in many ways.

The emerging paradigm of holism honors the indivisibility of body-mind-spirit. This new perspective also creates a wider variety of tools (mental/emotional and spiritual) for treating physical illness. Meditation and biofeedback, for example, improve physical health through a mental process. By extension, in a holistic perspective, our mental/emotional and spiritual health assumes a much higher value than in our current system.

In many ways, the holistic paradigm also supports the primacy of our spiritual path. For example, we find a distinction between curing (a physical removal of symptoms) and true healing. True healing occurs when mentally/emotionally and spiritually we move closer to balance, to a deeper alignment or congruence. Often, cancer brings people to healing without finding a cure for their physical malignancy. As in the principles of most eastern spiritual traditions and many western paths of mysticism, the physical body, our physical reality, is seen merely as a vehicle for spiritual learning. Reality becomes much less fixed and real; it becomes more an energetic approximation. These views are being reiterated by the discoveries of modern physics as elaborated in a number of powerful books (for example, Capra, 1975, 1991;Zukav, 1979.)

Our mental attitudes and beliefs structure the world in which we live. Our spiritual beliefs form the highest level of attitude and perspective that we employ to understand our world. Together, these views can empower us as we have the ability to tailor the content of our intra- and interpersonal world. Beyond this, our mind and spirit clearly influence the functioning of the human body. Most of the documented spontaneous remissions from advanced terminal cancer come from significant mental/emotional/spiritual transformations, not miraculous remedies (O'Regan & Hirshberg, 1993; Weil, 1995). We only have to look to the powerful physiological interventions that have been documented in the fields of hypnosis, biofeedback, placebos, and Indian yogis to see further evidence of this dramatic mind-body effect.

In fact, if we attempt to define the physical body as separate from mind and emotion, we would soon have great difficulty. Where do we draw the line? Is it between mind and brain? How do we categorize the work of the great neurosurgeon, Wilder Penfield, MD, and his electrical stimulations of memory, experience, and emotion? How do we separate psycho-neuro-immunology: the brain, the neuropeptide, the emotions, and the immune system? These issues, which have complicated our view of the body as a simple machine, fade as we open to a holistic perspective.

Body-mind-spirit becomes a whole with no dividing lines needed. The body, and its biochemical processes, blends imperceptibly with the neurologically

linked mental and emotional processes of the mind, and the neurologically linked processes of the mind blend imperceptibly with the attitudinal and belief structures of the spirit.

Spirit does not have to be some metaphysical construct from traditional religion. One could conceive of it as the more abstract, higher extremes of the mind. It could be nothing more than the summation of our identity and context expressed in emotional tones, attitudes, beliefs, and intentions. Quantum mechanics and chaos theory both give credence to the ability of one human energetic field (the human body/brain generates an easily measurable electromagnetic field-witness the electrical properties of the EEG and EKG) to affect other people (Becker, 1987).

Another perspective views the spirit as the nonlocal mind, as mentioned earlier. Larry Dossey, MD (1993), has written extensively about the healing power of both prayer and intention to create nonlocal (beyond the person) effects. If we truly embrace all that modern physics can teach us, we see that the impact of brain/mind is not limited to our person. Prayer, intention, and even religion may be tools for the positive development of our innate transpersonal spiritual capacity. Even in the most concrete and limited view (a bioelectrical view), this still opens the door for spiritual healing and connection.

However, spirit encompasses more than even speculation from our current science allows. As we explore this view and open our conceptual understanding, we must still hold this perspective to the light of scientific understanding and current data. Obviously, the current scientific paradigm, which generally negates/avoids mind and spirit, has not served our deeper understanding of mind or spirit very well.

Holism acknowledges our multidimensional self. It embraces our physical body, our mental/emotional self, and our spiritual being. Holism runs counter to the mind-body and spirit-body split, which has characterized Western thought for hundreds of years. By eliminating these divisions, it opens new possibilities for health care and understanding. A new model of human nature will also lead to a new process of exploring truth. Beyond that, it gives us permission for a more inclusive (and sustaining) view of who we really are.

V. BALANCE AND GUIDANCE

On the physical side, we can observe the ability of the body to heal itself. A skin laceration progressively heals and restores its original intact contours and structures. Our blood stays at an exquisitely balanced pH in spite of numerous imbalancing stressors. The list of similar examples in medicine is endless.

We have a term for our body's ability to maintain a constant internal milieu: homeostasis. Like a gyroscope, the body returns to its internal state of balance. Vitality is one description of the strength of the body's drive for physiological balance. The body's powerful innate drive to heal itself lies at the center of holism.

This drive for order in the face of the universal tendency toward disorder (entropy) forms the core of all life processes. The mechanistic worldview of Newton and the old paradigm offers no place for a deeper understanding of either life or health. The holistic paradigm explains this ability to self-correct and finds balance as a core element of life itself. The Belgian chemist, Ilya Prigogine, won a Nobel Prize for discovering how complex chemical solutions can self-organize to a higher level of complexity under certain conditions (Prigogine & Stengers,1984). This movement to order may be broader than just biological processes. It may be an inherent feature of our universe. Health and healing flow from our ability to repeatedly move back to a state of balance. This self-correction generally occurs through feedback loops of information, which creates guidance. Life creates order and maintains it.

If we look beyond the physiological drive for balance and order, we can see yet another, deeper reflection of this core principle of holism: self-correction occurs on the psychological and spiritual levels as well. On a mental level, we describe it as our gut, our conscience, our intuition, or other similar terms. It is an innate sense of what we need to do-what is right, or best for us. We generally know when we are following our inner guidance. Awareness is the tool needed to heighten our sensitivity to these internal messages. Mentally, emotionally, and spiritually, we move to order. The ultimate benefit of this move to internal and external congruence is true balance and harmony.

On a spiritual plane, self-guidance can be seen in the universal human need to find meaning and purpose. How do we fit in the grander scope of things? Order becomes our existential perspective on the spiritual level. Concentration camp survivors like Viktor Frankl and horribly abused children who exhibit profound emotional/mental/spiritual resilience share the amazing ability to find meaning in the midst of despair. Religion, in one way, functions as a system for structuring meaning and creating spiritual order. Not surprisingly, this has been a natural extension of every major culture on our planet.

C. G. Jung understood our spiritual nature and its inner guidance. He saw dreams as a problem-solving gift from the unconscious to help guide us in life, particularly when we are off course to our life purpose or not in deep congruence with our inner values. The *self* was his term for our core sense of who we are, which provides corrective guidance by day or by night.

Beyond this, he coined the term *synchronicity* to describe our outer world's ability to help us find inner meaning. Others call this *fate, luck,* or

chance. How could coincidence guide us? As we will see later, it can only occur if we all are imbedded in a matrix of meaning-if our spiritual self weaves with our physical reality.

Holism posits that we heal our selves and move toward balance on all levels. Physically, mentally, and spiritually, we self-correct and self-guide. Like the gyroscope, we all have a strong force pulling us back to a state of harmony. This force can be diminished by habits that decrease awareness and pull us further from balance. For example, on a physical level, overeating and addictions progressively reduce our physical vitality. Rigid and negative attitudes can block our internal guidance mentally. On an emotional level, chronic anger and hate limit our ability to perceive guiding emotional information. Selfish preoccupation constricts our ability to recognize how we fit into the larger spiritual framework of our existence. In my experience, childhood violence and sexual abuse can significantly impair our ability to receive internal guidance. While it can be limited, most of us arrive in adulthood with this potential intact.

This guidance can obviously be tuned out, but, conversely, it can also be amplified. Physical practices such as regular exercise and proper diet enhance this. Mental practices such as meditation improve our awareness. Emotional work to find balance will heighten our sensitivity. Spiritual techniques such as retreat, reflection, and contemplation can also improve our ability to self-guide.

Our body-mind-spirit has the innate ability to balance and self-guide. Unfortunately, current Western culture does very little to support the development of these skills. The current emphasis on materialism and excess often distorts our internal balance, whereas skills that build resiliency enhance the development of our ability to self-balance. Imagine how an educational curriculum focused on the skills of resiliency and self-regulation would improve our health and well-being. Is geometry or algebra more important to us over our lifetime? These physical, mental, emotional, social, and spiritual skills are not complex, but they must be developed and supported. Holism appreciates our ability to self-heal and self-guide (on all levels) under the proper circumstances.

VI. THE WEB OF LIFE

We do not exist in isolation. Life exists because we create an active, biochemical exchange with our environment. Through this interplay, we create and maintain physiological order. We also have an active process on emotional, mental, and spiritual levels. Life brings a dynamic process, which occurs on all levels. On every level-physically, emotionally, mentally, socially, spiritually-if we are not in the process of active exchange, we move

toward death. In fact, the best definition of death is the point at which this active exchange and the movement to order cease.

Many of us begin to die long before our heart stops beating. Do we close down emotionally and protect ourselves? Do we gradually isolate and shut down socially? Do we cease to expand and refine our spiritual view of our place in the world?

Life, on every level, demands an active dialogue with the external world. As a reflection of this, the most accurate understanding of any living organism focuses on its many interrelationships. This defines an ecological perspective. To hold a truly holistic view of human life, we must also hold an ecological view.

If we exist simultaneously on many levels (physical, mental, etc.), then our web of interconnections becomes fantastically complex. For example, we physically depend on water and food for sustenance. Who produced it? Who transported it? How does this consumption ripple through the environment and humanity? Mentally, we hold many views, whether political, philosophical, etc. How do these ideas connect or separate us from others? Socially, we have many superficial and some deeper relationships. How do these interactions alter the reactions and behaviors of others? Spiritually, our beliefs can weave us into community or isolate us. Our early relationships with our family often impact ongoing future relationships. Specific ideas that we learn may create a powerful and lasting force that alters our behavior in the world. Our current social network forms one major protective factor in our well-being.

How can we separate our self from all of these connections and define who we are in a static isolated manner? Holism demands an ecological context. A truly holistic perspective must include all relationships or interconnections. Any holistic examination of who we are individually will rapidly move to a broader understanding of our relationships and connections.

Holistic medicine places much greater importance on these interconnections, whereas mainstream health care tends to downplay them. A holistic physician (and most of the practices outlined in this text) honors the value of this web of life in which we exist-the quality of the food, air, and water that we take in; the context in which we work or study; the emotional tone within our home; the strength of our social support networks; and the nature of our spiritual connections.

As we increasingly acknowledge this web of life that so greatly impacts our existence, we are pulled beyond our self, outside our self. This development mirrors the ethical or spiritual development that we also move through as humans. It is a path from selfishness to selflessness, from egocentric to ecocentric. Kohlberg's model of moral development also echoes

this self-to-context progression (Colby, ***et*** *al.,* 1983). The highest spiritual acts typically involve compassion and self-less service. This defines the greatest good.

Spirituality at its core defines our connections to other people, the universe, and a higher power. An atheist may not believe in God, but if he or she creates an existential view that places him- or herself in the broader context of humanity, then he or she has a spirituality. Spirituality is more defined by the beliefs that we hold about our connections to others (laws, taboos, values, commandments) than a strict focus on a God or the afterlife. Spiritual or religious practice lies empty unless we elevate our behavior toward others and move away from selfishness.

A truly holistic perspective moves us to an ecological perspective and ultimately to a spiritual perspective. Consider Fritjof Capra's (1996) discussion of the connection of ecology and spiritual awareness:

> Ultimately, deep ecological awareness is spiritual or religious awareness. When the concept of the human spirit is understood as the mode of consciousness in which the individual feels a sense of belonging, or connectedness, to the cosmos as a whole, it becomes clear that ecological awareness is spiritual in its deepest essence. It is, therefore, not surprising that the emerging new vision of reality based on deep ecological awareness is consistent with the so-called perennial philosophy of spiritual traditions, whether we talk about the spirituality of Christian mystics, that of Buddhists, or the.. .the Native American traditions. (p. 7)

As we open our awareness to the multitude of interconnections that define us, we begin to realize just how unique and vital we are. We move away from a static, isolated concept about our personal identity and toward a more fluid dynamic view of our self. It does not matter how we label it (holistic, ecological, systems), this new view offers us greater opportunities for growth, positive change, and supportive connections. Every broad conceptual view of human nature outlined in this text reflects this perspective. The only modalities that do not mirror this are the narrow, more technique-driven approaches (such as eye movement desensitization and reprocessing, or) that are not embedded in a preexisting philosophy of human nature.

Our interconnections and relationships define who we are. This, in turn, dramatically enhances our view of human health care. As we step beyond the physical, mechanical view of human nature to a holistic view, we can expand our treatment repertoire almost infinitely. Every connection, every relationship (whether physical, mental, emotional, social, spiritual) becomes a possible avenue of change and transformation. When we alter any aspect of who we are, we further shift an already evolving, dynamic process. In fact, it may be difficult to draw a line where life stops and treatment begins.

VII. WHOLENESS

One of the greatest thinkers of all time, Aristotle, described a key principle of holism over 2300 years ago. He called it *entelechy* or *self-completion.* All living things move to completion. Acorns become oaks and tadpoles become frogs. A human embryo matures into a complete adult. This drive to completion carries such power that few things short of death or severe trauma can interrupt it. We tend to ignore this miracle of life. If we observed life on our planet with new eyes, this phenomenon would stand most magical. It is so ubiquitous in all of life that we do not really see it for what it is. Imagine throwing a twig and shard of glass together on the ground and finding a completed house in its place some time later.

We expect self-completion on a physical level. Small children grow into mature adults. This growth to maturity forms one key aspect of all life. With the principle of interconnectedness, we would expect this to occur on all levels of our being. Indeed, C. G. Jung and Abraham Maslow both described this phenomenon in great detail. Jung (1 97 1) called the process of human unfolding *individuation.* He saw it as the innate drive to reach maturity or completion on all levels. Maslow (197 1) called it *self-actualization.* As long as basic needs were met (food, shelter, etc.), Maslow saw us developing into higher levels of mental, emotional, and spiritual maturity.

Does this drive to completion mean that we have a predestined goal from the beginning? This question centers on whether this principle of completion is teleological. Does nature have an inherent purpose, design, and end point? Is life goal driven? The mechanists argue this principle is teleological and thus unscientific. Actually, this theory envisions nature as merely intelligent but does not require it to be goal driven. Nature itself responds to imbalance and chaos by channeling energy to create a higher level of order. Ecosystems and microorganisms adapt rapidly to external changes. The movement of life to higher levels of order offers us the best evidence of nature's ability to self-organize.

The acorn will become an oak, but the seed does not fully determine the outcome. The site, climate, soil, etc., all impact how it develops and what it will eventually look like. As humans, we all move to physical, mental, and spiritual completion/maturity, but our family, our relationships, and our experiences color what this will look like. Obviously, our free will creates perhaps the greatest variable in our development to wholeness. Because of our complexity and free will, we humans forge a much more variable path of development than an oak tree.

Counseling and psychotherapy take on a different perspective in this framework. BugentaL in his book *The Search for Authenticity* (1965), suggested that we view counseling as an opportunity to help people grow to their fullest possible

height or highest potential. Maslow (1971) put it this way, "The job is .. . to help them to be more perfectly what they already are, to be more full, more actualizing, more realizing, in fact what they are in potentiality." (p. 41)

In my work with young children with severe developmental disabilities or a history of severe physical/sexual abuse, I continually notice one common element about their presentation. In spite of all they do not possess, all that was damaged or lost, these youngsters marvelously adapt and move toward wholeness. Obviously, they have grave limitations, but their drive for wholeness, for understanding, for adaptation never ceases to impress me. Oliver Sachs, MD, the great neurologist who has authored many books, including *Awakenings* and *The Man Who Mistook* ***His*** *Wife for a Hat*, remarked at length about this topic in his work with people suffering from the gravest of neurological injuries or illnesses (1995):

> This sense of the brain's remarkable plasticity, its capacity for the most striking adaptations, not least in the special (and often desperate) circumstances of neural or sensory mishap, has come to dominate my own perception of my patients and their lives. So much so, indeed, that I am sometimes moved to wonder whether it may not be necessary to redefine the very concepts of "health" and "disease," to see these in terms of the ability of the organism to create a new organization and order, one that fits its special altered disposition and needs, rather than in terms of a rigidly defined "norm." (p. xvii)

Most of the profound neuroscientists of this century, including A. R. Luria, L. S. Vygotsky, and even Piaget, the developmental psychologist, have come to this same conclusion. They all emphasize the essential intactness of those with neurological injury. Sachs (1995), and others, developed a view of the human brain not as programmed and static but as

> .. . dynamic and active, a supremely efficient-adaptive system geared for evolution and change, ceaselessly adapting to the needs of the organisms, its need above all to construct a coherent self and world, whatever effects or disorders of brain function befell it.... The miracle is how they (the minutely differentiated areas of neurological function) all cooperate, are integrated together, in the creation of self. (p. xvii)

> The achievement of balance adds an extra quality to a whole. It makes the perfect whole greater than the sum of its parts, makes it beautiful and holy, and so connects it to a higher reality. Health is wholeness-wholeness in its most profound sense, with nothing left out and everything in just the right order to manifest the mystery of balance. Far from being simply the absence of disease, health is a dynamic and harmonious equilibrium of all the elements and forces making up and surrounding a human being. (Weil, 1983, p. 206)

VIII. THE HOLOGRAM

A hologram is a fully three-dimensional image created by the coherent light of a laser. This image can be stored on a photographic plate. The relevance for

our discussion involves a principle of holograms called distributedness. If you drop the glass plate, it will shatter into thousands of pieces. Select any fragment, no matter how small, and reilluminate it. You find a complete image: it is whole. Obviously, it has less detail but the complete image appears. The holographic process records the image in a distributed manner. Every part contains the whole.

Numerous neuroscience researchers from Lashley to Pribram have struggled to localize the site of specific memories. Many have been confused by how human memory could survive massive brain damage, even the removal of an entire cerebral hemisphere. In the 1920s, Karl Lashley demonstrated that the engram or memory trace could not be isolated in any specific compartment of the rat's brain (Lashley, 1929). Karl Pribram, MD, of Stanford studied this at length. In the 1960s, he proposed that the brain uses holographic models to store memory and performed numerous studies that supported this premise (Pribram, 1971).

Paul Pietsch, PhD, a neuroscientist at the University of Indiana, took this one step further. He was a structuralist (site = function) and believed Pribram to be dead wrong. In studying memory in salamanders, he found that not only was memory not localized, but he could also scramble the salamander's brain completely and the creature would still remember (Pietsch, 1981). Memory appeared to be completely distributed, not localized. Pietsch was thus transformed from an ardent skeptic to one of Pribram's greatest advocates. Wilder Penfield, MD, the famous Canadian neurosurgeon who did extensive mapping of the brain, also started, like Pietsch, as a strict structuralist. By the end of his career, he concluded, "our being consists of two fundamental elements." Those elements were "brain and mind" (Penfield, 1975). The human brain's plasticity, ability to adapt, and tendency to wholeness overwhelmed whatever he found out about anatomy and structure.

The physicist David Bohm, PhD, has proposed the farthest reaches of this concept. Bohm was a contemporary of Albert Einstein who studied and taught quantum mechanics. In the 1950s, Bohm published a text on this topic, *Causality and Chance in Modern Physics* (1957). In prior discussions, Einstein remarked that Bohm seemed to understand his thoughts as well as anyone.

Later in his life, Bohm began to study holography and the principles of holograms. He then began to reconceptualize his view of nature and reality. In 1980, Bohm presented a mature distillation of his views in a book entitled *Wholeness and the Implicate Order.* Perhaps the most startling concept that Bohm shared was his view that the reality of our life is really a type of illusion, like a holographic image. Our brain/mind transforms the holographic illusion into our reality. He identified two orders of existence in our universe. The deeper order of reality Bohm called the *implicate* (which means

enfolded), and he labeled our own level of existence as the *explicate,* or unfolded order. This reconceptualization helps to explain the paradoxes of quantum mechanics and mind/brain.

Einstein staggered the world with his concept of the space-time continuum. Bohm took this concept further by seeing everything in the universe as part of a continuum. Despite the separations that we observe in our own reality, everything is a seamless extension of everything else. Bohm described consciousness as a more subtle form of matter: it is present in various degrees in all of matter, not just living organisms.

This is why he stated that forms of matter exhibit features of living things: plasma gases and the self-organizing chemical compounds of Prigogine, to name a few. Bohm said, "The ability of form to be active is the most characteristic feature of the mind, and we have something that is mind-like already with the electron." (Wilber, 1985, p. 51)

This theory has not been proven, but it has been widely embraced by a range of deep thinkers. Ken Wilber, the author of many books on philosophy and psychology, was so taken by this theory that he edited a text on this topic, *The Holographic Paradigm* (1985). The implications that flow from this viewpoint are staggering. Bohm described the underpinnings of the implicate order as *meaning.* We are all woven together in a web of meaning that stands preeminent within matter. This theory explains not only mind/brain, but also such concepts as synchronicity, parapsychology, and the self-organizing properties of all life.

When taken as a whole, Bohm's theory sounds more like the views of a mystic than an incredibly thoughtful and respected theoretical physicist. It makes room for a profound interconnection of all things living. The web of life does not completely explain the interpretation of all things. In a beautiful elaboration of holism, Bohm said, "The true state of affairs in the material world is wholeness. If we are fragmented, we must blame it on our self." (Wilber, 1985, p. 67)

Perhaps most important, this theory grounds spirituality in a broader context. We live in a world of illusion or *Maya,* as the Buddhists call it. *Meaning,* not physical things, is the foundation of all. Our struggle in this reality is to find our own deeper meaning and our own connection to all things. As David Bohm noted (Wilber, 1985):

> Relativity and, even more important, quantum mechanics have strongly suggested ... that the world cannot be analyzed into separate and independently existing parts. Moreover, each part somehow involves all the others: contains them or enfolds them. This fact suggests that the sphere of ordinary material life and the sphere of mystical experiences have a shared order and that this will allow a fruitful relationship between them. (p. 44)

IX. SUMMARY

Terms like cybernetics, ecology, systems theory, holography, and self-correcting/self-organizing systems and wholeness can pull us to a deeper understanding of the new paradigm and how it impacts mental health. We can see that the arena of life expresses these principles of holism on whatever level it exists. Whether it is microorganisms cooperatively existing in a pond to the ability of the mind to adapt to neurological injury, both speak of holism. Some would say that the earth exists as a single living organism that actively balances and provides stability in climate and atmosphere. This is the *Gaia* hypothesis, outlined in the book *Gaia* (Lovelock; 1979). All of these examples reflect the principles of holism.

Whether we view reality in the most limited perspective generated by relativity and quantum mechanics or the most extreme (Bohm, 1980), our reality assumes a much less rigid and much more interdynamic role. We live in a universe that consists of energetic interactions of particles whose existence only can be ultimately described as a probability of interaction. All things are dynamic and interconnected by a web of interconnections.

As we step back and examine how this new paradigm impacts the treatment of mental illness, it brings a few major implications. First, it does nothing to invalidate our current treatments; it merely massively broadens our perspective of human functioning and potential. This emerging paradigm, in turn, opens uncountable new doors for addressing human mental/emotional distress. Some of these options are well outlined in the chapters that follow. The full implication of this new potential for treatment goes well beyond what can be contained in this text or any other. Human mental health treatment options mirror the indescribable pluripotentiality of the human being. Some forms have been described and used for thousands of years (acupuncture, spiritual health, and Ayurveda); others are recent additions (Hakomi, process work, and eye movement desensitization and reprocessing [EMDR]). We can only guess what new forms of healing will follow.

Next, it highlights the critical impact of personal relationship in any healing modality. The qualities of the relationship between two individuals take on greater importance and more depth. The dynamic nature of human existence may best be characterized by the nature and quality of the interpersonal connections that link us to others.

X. RESOURCES

Academy for Health Services Research and Health Policy
1801 K Street NW, Suite 701-L

Washington, DC 20006-1301
Telephone: (202)292-6700
E-mail: info@ahsrhp.org
Web site: http://www.ahsr.org

American Holistic Health Association
Post Office Box 17400
Anaheim, CA 928 17-7400
Telephone: (714)779-6152
E-mail: www.ahha.org

Integrative Medicine Program
University of Arizona, College of Medicine
Box 5099
Tucson, AZ 85724
Telephone: (520)626-6235

International Society for Quality of Life Research
6728 Old McLean Village Drive
McLean, VA 22101-3906
Telephone: (703)556-9222
E-mail: info@isoqol.org

Mind/Body Medical Institute
Deaconess Hospital
One Deaconess Road
Boston, MA 02215

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Chapter **3**

Cranial Osteopathy

R. Paul Lee, DO, FAAO

I. MODALITY OVERVIEW

A. DESCRIPTION

1. The Primary Respiratory Mechanism

Cranial osteopathy (also referred to as osteopathy in the cranial field, cranial manipulation, and the cranial concept) is unique because it engages the primary respiratory mechanism, a subtle physiological oscillation expressed within the fluids and tissues of the organism (see Section I.B.3). This health-

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giving fluid fluctuation had remained entirely unrecognized by organized medicine until William Garner Sutherland, DO (1939), discovered it, through astute observation and ingenious experimentation (see Section I.B.2). Conventional medical practitioners generally do not acknowledge the primary respiratory mechanism, however, practitioners of visceral manipulation, Craniosacral Therapy, cranial osteopathy, and other osteopathic techniques not only recognize but also utilize it for both diagnosis and treatment.

2. Balanced Tissue Tension

As with the application of all osteopathic manipulative procedures, cranial osteopathy provides structural balance. In so doing, it facilitates the integration of the entire human being. To accomplish structural alignment the physician engages the primary respiratory mechanism through a meaningful but gentle touch. He or she evaluates its amplitude, rate, and vitality, and discovers areas of distortion.

Any distortion, disturbance, and/or diminution of the oscillation of the fluid/tissue indicate that the connective tissue is harboring a misalignment. An area of perturbed motion lies outside the unitary action of the body and therefore, in this sense, is separated from the rest of the body. To reintegrate such an area of perturbation is the goal of treatment.

3. Treatment

Treatment ensues when the operator manually creates a three-dimensional balance of tissue tension in an area of perturbation. The body responds by realigning the tissues. At the completion of a successful treatment an easy, regular, symmetric fluctuation of the fluid/tissue emerges. At least two characteristics of the living organism are related to this realignment: the *piezoelectric* activity of the connective tissues and the *potency* of biological fluids.

a. Piezoelectric Activity of Connective Tissue

The bipolar collagen fibers are oriented such that connective tissue behaves as a *transducer of electric and mechanical energies*, meeting the definition of piezoelectric activity. Becker (1990) has shown that stress-induced bone remodeling is caused by muscular activity and gravity, which slightly bend the bone and trigger electric currents, as predicted by the piezoelectric effect. The electric current stimulates osteoblasts to lay down collagen in an orderly architecture, determined by the lines of force. Similarly, fibroblasts determine the architecture of soft connective tissues in response to physiological and pathological lines of force (see Figure 1).

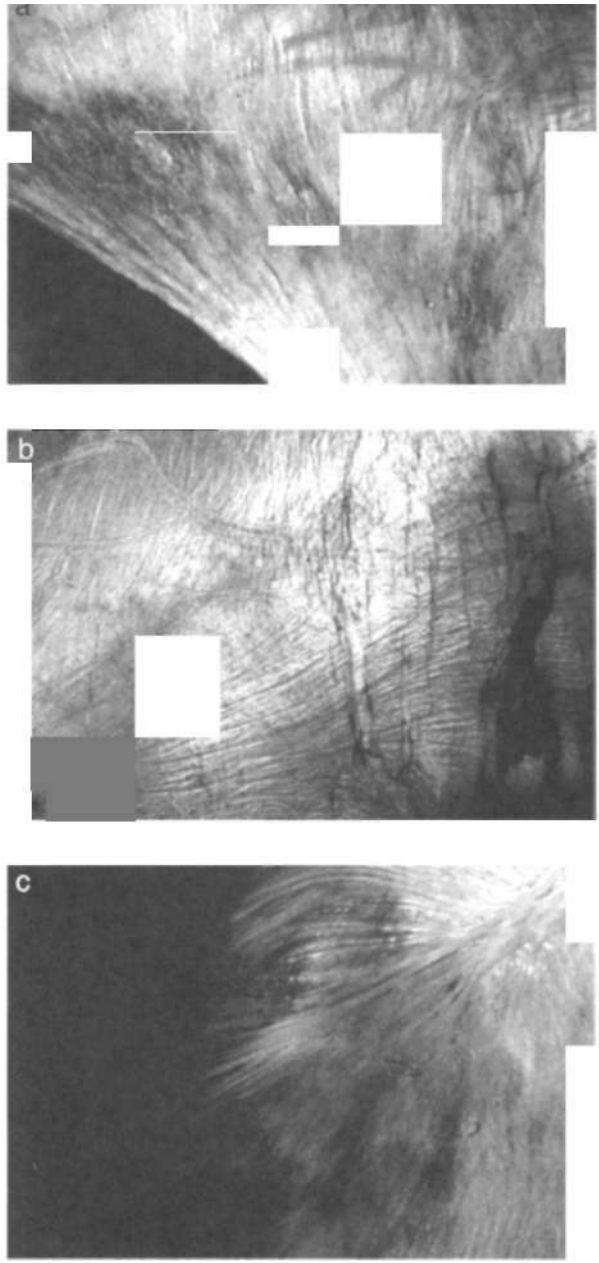

Figure 1 Three different falx cerebri displaying variations in fiber arrangement. (From Upledger, J. E. and Vredevoogd. J. Craniosacral Therapy slide series, The Upledger Institute, Palm Beach Gardens, FL, slides 34, 35, and 36.)

Conversely, during treatment the physician manually aligns distorted collagen fibers in traumatized connective tissues by achieving a three-dimensional balance in tissue tension, which permits the flow of current where it had formerly been disturbed by the disorganizing effects of trauma. If the coup exceeded the inherent tensile strength of the collagen in the tissues, a distortion in the architecture of the tissues remains after the trauma. The force of the trauma, that is, its direction and quantity (the definition of a vector), is registered and able to be palpably perceived in the connective tissues as a perturbation of the oscillation and a distortion of the tissue tension. This distortion can be detected through palpation (diagnosis), and the energy of the trauma can be freed from the tissues (treatment). Then the tissues can be restored to both normal energetic activity and structural alignment (Pischinger, 1991).

b. "Potency " of Biologic Fluids

William G. Sutherland, DO (see Section LB.2), indicated that the "potency" of the cerebrospinal fluid plays a significant role in cranial osteopathy by restoring health to the tissues. The ***hydraulic power*** of the fluctuation of fluid in the body is one aspect of this potency. Biological fluids are incompressible, a characteristic of water. This affords the fluids a power to move objects and dissolved substances. Using this power, the physician can direct the "tide" (a palpable fluctuation of fluid in the tissues of the organism), as Sutherland indicated, to effect positive change in the oscillation of the fluid/tissues.

Another aspect of potency as described by Sutherland is the ***electrochemical characteristics*** of biological fluids. Sutherland noted the dynamo-like activity of the coiling and uncoiling of the brain (see Figure 8). This inherent activity of the brain creates a potential difference between parts of the brain, which charges the cerebrospinal fluid, giving it electrochemical potency. The movement and concentration gradients of electrolytes within biological fluids have pervasive and ubiquitous effects on cellular physiology. Calcium waves have been shown to exist within the extracellular and intracellular fluids and have also been shown to demonstrate controlling effects upon metabolic activity (see Sections IV and VII.B., King, H. H. [Ed.]).

4. The "Breath of Life"

Sutherland conceived that the primary respiratory mechanism (see Section I.B.3) is the physical manifestation of what he called the "breath of life." He adopted the term from the Bible, in which it states, "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath

of life; and man became a living soul." (Genesis 2:7). His conception of the breath of life grew out of his experience with the tide (see Section I.A.3.b). This fluid oscillation is a manifestation of the life force. It brings health to the tissues. Beneath one's hands, at the completion of treatment, tissues that felt less vital become vitalized; suppleness returns; warmth emanates, implying improved blood flow and metabolic activity; edema diminishes; and joint motion becomes freer.

B. HISTORY AND PHILOSOPHY

1. Andrew Taylor Still, MD

Cranial osteopathy is an expansion of osteopathy (Still, 1892, 1899, 1908, 1910), a term coined by Andrew Taylor Still, MD (1828-1917), to define his ideas, which were the basis of the eventual establishment of a parallel medical profession, now called osteopathic medicine. Dr. Still concluded, after a decade of contemplation and independent study, that structure and function are reciprocally interrelated in the body and that for self-healing to succeed, attention must be paid to the neuromusculoskeletal system, the largest and energetically most demanding system in the body. Neurovascular, lymphatic, and organ dysfunctions explain some of the effects of disturbed biomechanics, according to Still.

2. William Gamer Sutherland, DO

William Garner Sutherland (1873-1954), a student of Dr. Still, learned that each structure has a function, and each function creates a structure. Under the influence of these concepts, Sutherland happened upon a disarticulated skull that Dr. Still had placed on display. His attention was drawn to the sphenosquamous suture, which appeared to him to exhibit a structure that allows for a respiratory function, "like the gills of a fish" (Sutherland, 1998, p. 214). Such a notion was contrary to what he had been taught: that the sutures of the skull fuse after childhood, disallowing any motion, and he dismissed it from his mind.

a. *Sutherland's* Research

However, the idea would not let him rest, and after several years of wondering, he employed his penknife to carefully disarticulate a skull. This task is no mean feat and by itself distinguishes Sutherland. The bevels of all the sutures clearly demonstrated to him evidence of articular mobility. As he

came to appreciate the motion of each bone, it became clear that the motion of one suture coordinates with all the others throughout the skull. Along each suture he found bevels revealing established angles of motion. Changes in the bevels at certain points along the surface of a suture exhibit fulcra for these motions. The bevel is at the expense of the inner table of a particular cranial bone, and then it shifts at the fulcrum to be at the expense of the outer table of the same bone (see Figure 4). These findings are consistent for each cranial bone among all specimens. Thus, Sutherland first recognized in the bevels of the sutures evidence of a structure that had been created by a preexisting function, the yet-to-be-described primary respiratory mechanism.

b. Self-Experimentation

Next, Sutherland began to experiment on his own head. He shifted from examining the dried evidence of former motion to the living mechanism. He fashioned belts, pads, pulleys, and tourniquets, and with his profound knowledge of cranial anatomy and function, he assessed the relationship between abnormal motion and function. Sometimes he left in his head, for hours or days, the asymmetry he had created, to assess the clinical effects. At various times he found himself in pain, confused, irritable, fearful, and/or depressed. He always managed to undo afterward what he had carefully planned to do beforehand. At one point his wife asked him to stop, but he assured her that he felt protected and that he was onto something that demanded elucidation (Sutherland, A.S., 1962).

3. Five Elements of Primary Respiration

Because he performed experiments upon himself, Sutherland obtained the certainty of knowledge rather than the hearsay of information. He experienced fluid fluctuations, sacral motion, and other phenomena which provided him with profound understanding and conviction for his explication to the world about the primary respiratory mechanism.

Sutherland learned that the skull bones move in a regular rhythm, which he termed "flexion" and "extension" (see Figure 3). He also learned that the dural membranes limit and guide the motion of the cranial bones to integrate the skull as a functional unit (see Figure 4). Further, a continuation of these same dural membranes down the spinal canal also integrates the motion of the sacrum with that of the cranial base (see Figure *5).* He learned that the brain coils and uncoils in phases of inhalation and exhalation, respectively, in a recapitulation of the embryonic development of the cerebrum, in the

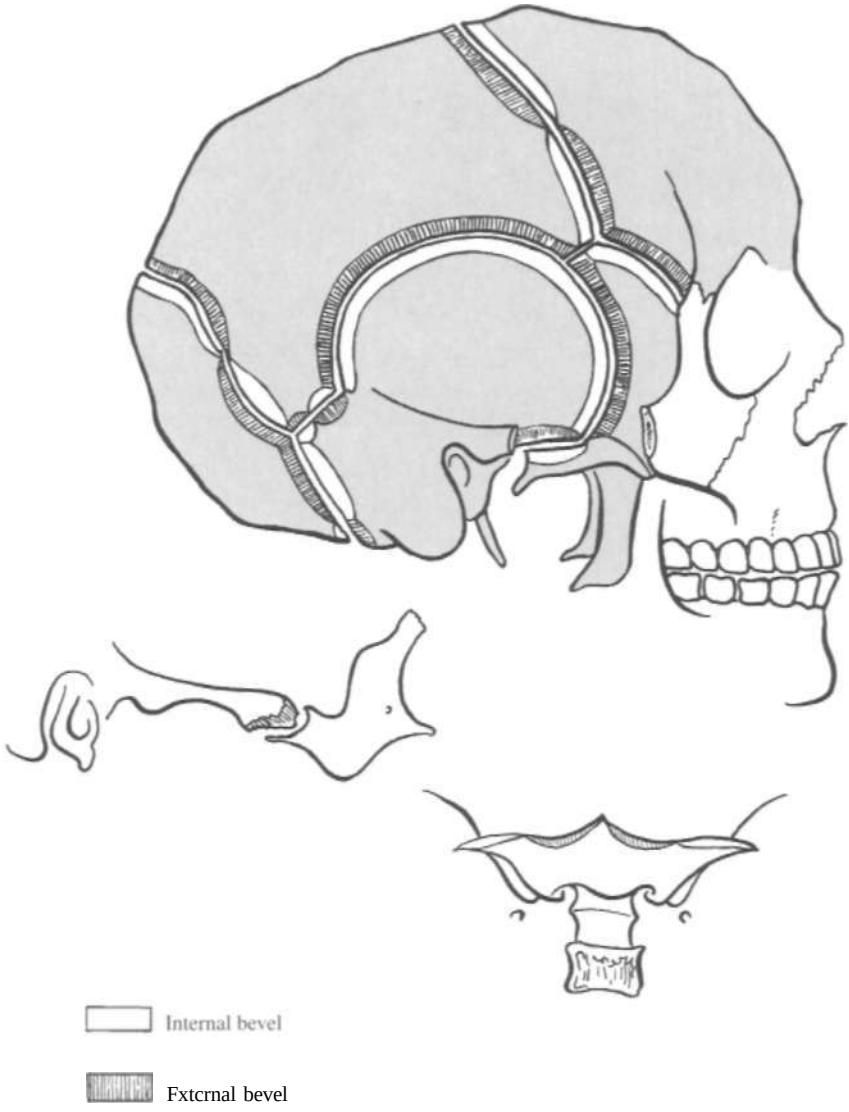

Figure 2 The bevels of the sutures of the skull. (From Gehin, A. (1985). Atlas of manipulative techniques for the cranium and the face, Seattle, WA: Eastland Press, p. 3.)

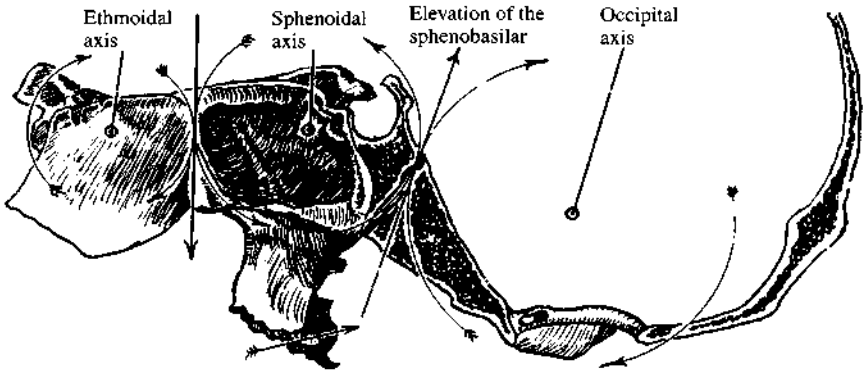

Figure 3 The movement of the bones of the cranial base in flexion. (From Magoun, H. I. (1976). Osteopathy in the cranial field, 3rd ed., The Sutherland Cranial Teaching Foundation, p. 50.)

conformation of a ram's horn (see Figure 8). In addition to circulating, Sutherland discovered that the cerebrospinal fluid also fluctuates (see Table 1) (Sutherland, W.G., 1998).

C. CURRENT TRENDS

Craniosacral Therapy, a term copyrighted by John Upledger, DO, refers to a therapy that Upledger developed for lay therapists and professionals, alike. This method is derived from cranial osteopathy, but by necessity it is simplified for nonphysicians, such as massage therapists. The Upledger Institute teaches it. Strong feelings against this therapy exist within the osteopathic community. Physicians believe that nonphysicians are unqualifiedf to provide a treatment,

Table I

The Primary Respiratory Mechanism

1. The inherent motility of the central nervous system.
2. The fluctuation and potency of the cerebrospinal fluid.
3. The guiding and limiting activity of the dura! membranes.
4. The articular mobility of the cranial bones.
5. The articular mobility of the sacrum between the ilia.

The five elements of the primary respiratory mechanism as proposed by William G. Sutherland.

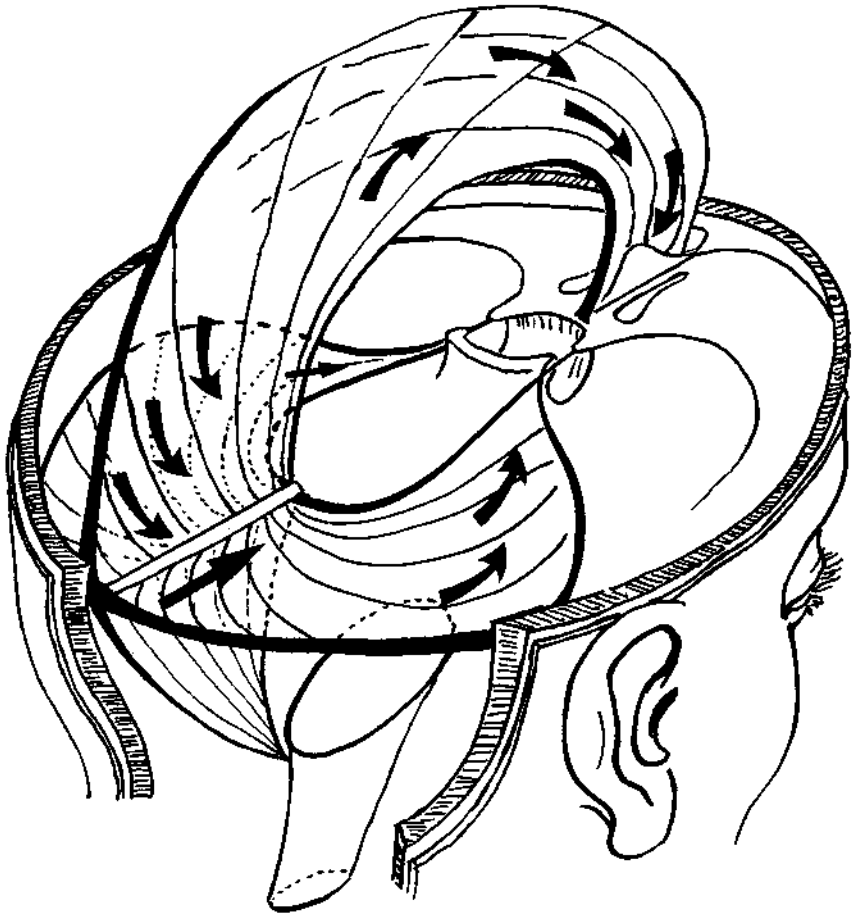

Figure 4 The reciprocal tension (dural) membranes within the cranium. (From Gehin, A. (1985). Atlas of manipulative techniques for the cranium and the face, Seattle, WA: Eastland Press, p. 5)

which is a part of an entire system of medicine. They eel osteopathic treatment is to be provided by physicians and, further, by those who comprehend osteopathic concepts well. On the other hand, the promotion of CranioSacral Therapy has increased the visibility of cranial osteopathy far beyond the osteopathic profession. However, that which the physician does is now commonly called CranioSacral Therapy, a technique only, rather than cranial

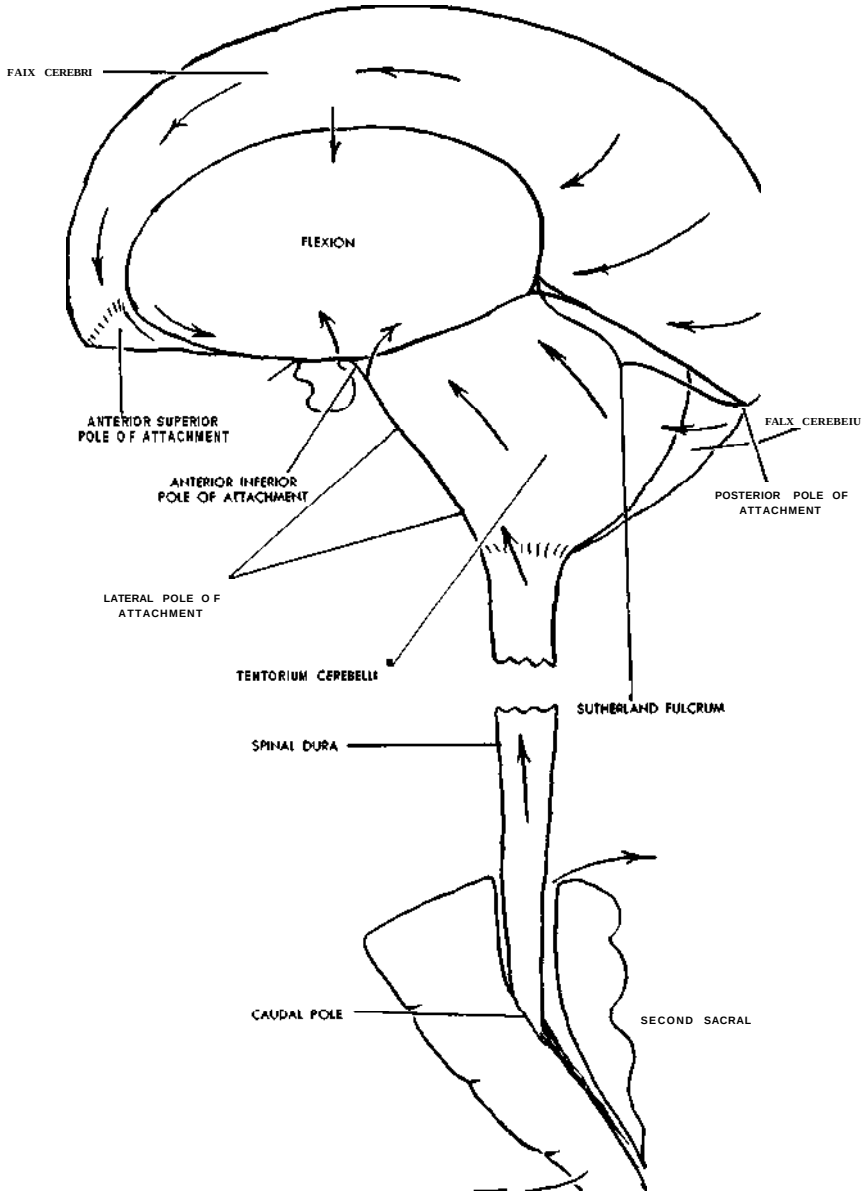

Figure 5 The connection of the reciprocal tension (dural) membranes between the skull and the sacrum. (From Magoun, H. I. (1976). Osteopathy in the cranial field, 3rd ed., The Sutherland Cranial Teaching Foundation, p. 37.)

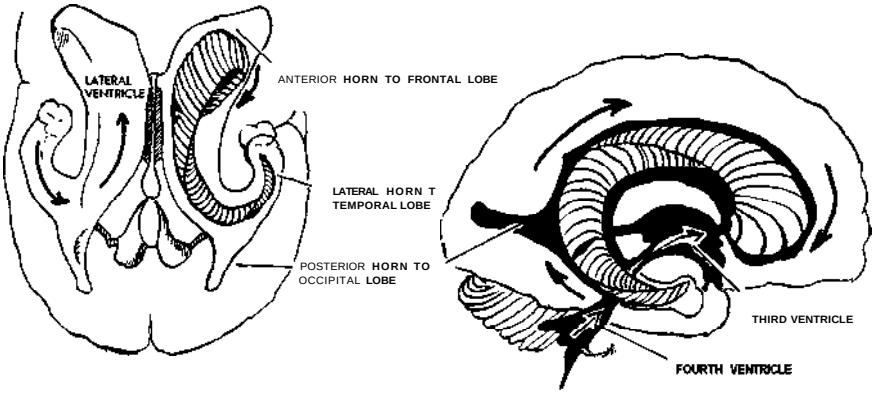

Figure 6 The conformation and motion of the cerebrum. (From Magoun, H. I. (1976). Osteopathy in the cranial field, 3rd ed., The Sutherland Cranial Teaching Foundation, p. 35.)

osteopathy, which is a system of medicine. Conversely, a few osteopathic physicians believe that whatever level of skill is applied to the healing of patients is helpful, and they welcome Craniosacral Therapy.

II. **RELEVANCE FOR MENTAL HEALTH**

. . . it is through our bodies, as well as our minds, that we discover the key to its [mind's] healing.

Levine *(1997, **p.*** 34)

A. THE CONCEPT OF BODY/MIND

Important to the field of mental health, beyond the biomechanical effects are the mental/emotional effects of cranial osteopathy. As Peter Levine (1997, p. 17) stated, "The key to healing traumatic symptoms in humans is in our physiology. When faced with what is perceived as inescapable or overwhelming threat, humans and animals both use the immobility response." Levine (1997, p. 19) went on to say, "Traumatic symptoms are not caused by

the 'triggering' event itself. They stem from the frozen residue of energy that has not been resolved and discharged."

Cranial osteopathy discharges frozen residues of energy from the connective tissues and with it the trapped emotional/mental/spiritual charge. Cranial osteopathy implies that the connective tissue with its oscillating fluids is the matrix for biomechanical, electromagnetic, as well as subtle energies, which are all necessary for the health of the living organism. Treatment simultaneously benefits the material, mental/emotional, and spiritual aspects.

Therapeutically directing the tide (see Section I.A.3.b) dissipates energetic residues and reintegrates the area of trauma, both structurally and energetically. Using cranial osteopathy, one taps the physical body as a common ground for mental, emotional, and physical ills, and for their healing.

1. Physics and Body/Mind

Modern physics shows, through the "bootstrap hypothesis" (Capra, 1991, pp. 285-301) how fields of energy interpenetrate. Moreover, physics proves false our common illusion that matter is solid, but demonstrates rather that it is energy, thus offering an explanation for the manner by which emotional, mental, and physical energies coexist in time and space in the organism.

Out of quantum physics comes the image of reality that everything originates from a void. But this void is a rich matrix, everywhere continuous and consistent except where it concentrates for the emergence of a particle of matter or energy. After emerging, the subatomic particle (quantum) quickly disappears from our means of detection, only to have another one appear. The winking on and off of subatomic particles shows how matter and energy are both derived from this matrix. The void is sometimes equated with the concept of ether and subtle energy (Capra, 199 1, pp. 207-223).

2. Ether and Ch'i

The concept of Ch'i corresponds to this matrix or void. According to the neo-Confucians, "Ch'i is . . . a tenuous and nonperceptible form of matter which is present throughout space and can condense into solid material objects." In addition, "Ch'i literally means 'gas' or 'ether,' and was used in ancient China to denote *the vital breath or energy animating the cosmos"* [italics by author] (Capra, 1991, p. 213).

Wilhelm Reich used the term *orgone* to describe an energy that he characterized similarly. Like Ch'i or ether, it is ubiquitous, life giving, and able to be collected for its therapeutic benefits. It expresses itself physically in the function of the orgasm.

B. SPIRIT AND CRANIAL OSTEOPATHY

The love of God unutterable and perfect flows into a pure soul the way light rushes into a transparent object.

Dante

Emanuel Swedenborg (1688-1772) indicated that the cosmos is filled with a stream of heat and light from the spiritual sun, just as the solar system is filled from the natural sun. This heat and light flow into man: "the heat into his will, where it produces the good of love; and the light into his understanding, where it produces the truth of wisdom." The flow from the spiritual sun enters the physical body vivifying it through thought and action (Swedenborg, 1947, p. 17). This stream of spiritual substance compares to Ch'i and orgone.

Swedenborg stated that the soul is life and clothes itself with the otherwise inert body. He said that life is found in the fluids between the fibers (Swedenborg, 1947, pp. 28, 32).

Likewise, A. T. Still (1892, p. 61) said, "The soul of man, with all the streams of pure living water, seems to dwell in the fascia of the body."

Sutherland indicated that the breath of life vitalizes the body. A useful model follows, which describes the means by which it affects the tissues. The life force (breath of life [Sutherland]; orgone [Reich]; Ch'i [neo-Confucians]; spiritual flux [Swedenborg]) expands the fibers of the meshwork of the connective tissues. These fibers, which would otherwise be inert, provide an inherent mechanical resistance against the constant ebullience of the breath of life. The fibers of elastin and collagen, eventually stretched to their maximum, overcome the expansion provided by the life force and create a contraction. In turn, the breath of life resists the tissue contraction, eventually creating another expansion. The cycle repeats itself. Thus, the interaction of spirit and matter result in an oscillation, the inherent resonance of the tissues. Sutherland called this fluctuation the inhalation and exhalation phases of the primary respiratory mechanism.

In its simplest definition, mental illness is a separation of oneself from one's soul. Considering the evidence from physics and these spiritual models from ancient China, Swedenborg, Reich, Still, and Sutherland, it follows that mental/emotional disturbances are treated simultaneously as the associated biomechanical ones are relieved.

C. CLINICAL EXPERIENCE

Experience reveals that at the moment when the practitioner places the patient in the posture, which was associated with the original traumatic event, memories of emotional trauma might emerge (Upledger, 1990, pp. 26-29). Such a posture is discovered by the physician through palpation to find the three-dimensional balance in the connective tissues (see Section I.A.2). That position of balanced tension sometimes places the patient's body far from anatomical symmetry, but is, in fact, the position into which the patient's body was forced at the time of the traumatic event. Relieving "tissue memory" creates a healing that is holistic (Upledger, 1983).

Through clinical experience, a variety of phenomena occur with treatment. These include visualizations by patients of the traumatic event, reexperiencing emotions, reliving long-forgotten pain, and/or physiological dysfunctions (palpitations, diarrhea, swelling, bruising) that had occurred at the time of the trauma but had been quiescent. These phenomena may occur spontaneously, without prompting, at the time of treatment or hours to days later, and they may last for a moment or for many days. Sometimes, at the time of treatment, tears will come for reasons unknown to the patient. Sometimes pain will appear, which later the patient might remember mimics a previous trauma, one that had been forgotten until a postural stimulus during treatment reminds the patient. These phenomena validate the concepts of tissue memory and body/mind unity.

The clinical diagnosis, *somatoform disorder* gives us a model, albeit one of disease, for the way this works. It demonstrates the body/mind phenomenon in action. Likewise, the *placebo effect* shows us the power of mind in relation to the physical.

Cranial osteopathy facilitates the opening of the patient to the process for healing. Often, there comes a moment in the course of treatment when the patient confides spontaneously that he or she understands more clearly something about himself or herself, about a relationship, or about the nature of reality. Acceptance of the situation at hand signals the integration of the trauma.

III. **RISKS, CONTRAINDICATIONS, AND COMPATIBILITY**

Being a gentle and allowing form of therapy, cranial osteopathy is relatively safe. It is guided by the inherent intelligence of the body. Contraindications relate to acute head trauma, in which there might be an intracranial bleed or skull fracture. However, once assurances about bleeding and fracture have been

secured, head trauma and other injuries are certainly indications for cranial osteopathy. Seizures are a relative contraindication, being benefited in many cases.

To integrate cranial osteopathy with conventional medical therapies would benefit many conditions that presently are poorly managed by conventional means; to name a few: recurrent otitis media, low back pain, migraine cephalgia, and, of course, somato-emotional distress.

Cranial osteopathy is likely to be helpful for most conditions; however, it is certainly not a panacea. It is compatible with conventional medicine in cases of severe debility to those of relatively good health and from the newborn to the aged. It may bring relief where other modalities have failed, but it may only be adjunctive in other situations.

IV. RESEARCH: RATING = 4/6

Recently, evidence-based approaches and outcome studies have become accepted, valid measures for a particular treatment. Such an approach lends itself to cranial osteopathy.

Simultaneously, the National Institute for Osteopathic Research and Education (NIFORE) has been established. It organizes large, multicentered, prospective, outcome studies to evaluate the effectiveness of osteopathic manipulative treatment (OMT), cranial osteopathy, included. This effort is proceeding with the establishment of a database collection center, the validation of research instruments to collect clinical data, and the creation of a tenter to implement and oversee research protocols. Publications from these studies are due to appear in journals by 2002 or 2003.

Collaborative research between basic scientists and clinicians is presently underway to demonstrate, by instrumentation, the occurrence of physiological and palpatory changes before and after a therapeutic event.

A bibliography has been published from a compilation of papers supporting the cranial concept, which have been reported in the standard medical and scientific journals (King, 1999). A summary of this medical and scientific literature in support of the cranial concept appears in an article by King (2000).

There are many case reports and studies of clinical experience in the osteopathic literature, especially ***The Cranial Letter*** and ***The*** *AAO* ***Journal*** (see Section VII.B). These references are not easily found because the National Library of Medicine has excluded osteopathic journals from the "Index Medicus." At the University of North Texas Health Science Center at Fort Worth, the osteopathic literature is now being indexed and is available as any other medical reference (see Section VILA, The Gibson D. Lewis Library and the A. T. Still Memorial Library).

V. SIMPLE TREATMENT AND CASE HISTORIES

Explanations about treatment are covered in Section I.A. Generally, the physician screens the patient for asymmetries and then carefully palpates any region of asymmetry for tissue texture change, tenderness, or restricted motion. Then, in order to restore normal motion, the physician addresses, with a treatment modality, specific joints in areas of asymmetry, which demonstrate restriction of motion. The techniques used to accomplish this might range from high velocity, muscle energy, myofascial, counterstrain, functional, to cranial osteopathy. All these forms of OMT may create an emotional effect while altering the physical structure. Cranial osteopathy is the method most associated with mental/emotional effects.

The following cases demonstrate the relationship between the physical and emotional/mental/spiritual effects of cranial osteopathy.

A, CASE l: LEARNING DISABILITY AND OSGOOD-SCHLATTER DISEASE

The mother of an 11-year-old boy brought him in for evaluation and treatment because he was a very slow reader. The child said he could not concentrate, especially when he read. He could concentrate better when someone gave him information orally, but he could not comprehend the written word well.

He also ran track at school and had pain in his left knee when he went up stairs. He was forced to use only his right leg to climb stairs. Otherwise he was in robust health.

The mother reported that the child's birth lasted 36 hours and was difficult. His head had been bruised after birth, and it had a funny shape for many months.

Upon examination, the primary respiratory mechanism was severely diminished on the left side of his cranium and a palpable fascial strain proceeded from the left cranial base through the cervical musculature, thorax, and on into the left diaphragm, psoas muscle distorting the femoral angle at the left knee. The tibial tuberosity was acutely inflamed, being hot, swollen, and red.

Treatment to the cranium was accomplished with hands gently placed on either side, monitoring the tide. Suddenly, a most unusual phenomenon was felt, like the vibration of air being let out of the neck of a balloon. The location of the vibration was at the interventricular foramen of Monro, where the left lateral ventricle meets the third ventricle. By palpation, it seemed as though the lateral ventricle filled with cerebrospinal fluid. Next, it became

clear by palpating the fascia1 strain that the distortion of the center of the brain was related to the distortion of the cranial bones and myofascial structures that lead all the way to the left knee. These were all treated.

At the next visit, the patient reported he was able to read and concentrate better, especially for the first 2 days after the first treatment, but for the last 2 days he noticed he could not read as well again. His knee still hurt, but he felt like it might be healing. Treatment at the second session was uneventful and built upon the previous session.

During the third session, the patient reported that he had bought a 500-page book and was settling down to read it every night. His knee was better, and he was able to carefully climb stairs.

Follow-up was reduced in frequency, but the patient maintained his reading skill. One and two years later, as he passed through puberty, his academic and sports success was extraordinary. He qualified for the state track meet as a freshman in high school and was scoring all As in his schoolwork.

B. CASE 2: POSTPARTUM DEPRESSION

A 30-year-old female presented with depression, saying she was unable to care for her new baby. Although she had looked forward so much to this, her third child, the experience was so overwhelming that she had to have help from her mother. But now, 4 weeks after the birth, the infant's grandmother was going to have to return home, and the mother felt incapable of managing. She cried every day, sometimes for no apparent reason. She sat in her rocking chair and stared while feeding her new baby, not enjoying her as she imagined she would, or as she had enjoyed her other two infants.

The birth had been precipitous, the baby coming before the doctor could scrub. For ten days postpartum she was very uncomfortable from perineal lacerations.

An examination revealed that the primary respiratory mechanism was almost nonexistent in the sacrum. The sacrum was caught in a posture frequently associated with a whiplash injury or a precipitous birth: the base anterior and the apex posterior.

Treatment was accompanied by a report from the patient that she felt a relaxation at the moment the sacrum was released. At her next visit, she reported feeling much better. She was bonding anew with her baby and managing without her mother's help. The sacrum was freely mobile. She has remained happy over the course of several years with visits to the doctor for other maladies.

C. **CASE** 3; **DEPRESSION AND PELVIC PAIN**

A 43-year-old, mildly obese female presented with the complaint of pelvic pain, constipation, decreased libido, and headache. The pelvic pain preceded her menses each month, and this was accompanied by generalized headaches and crying spells. She felt love for her devoted husband, but could not engage in intercourse without feeling as though he was forcing her. She was never aroused and had to use lubrication.

She related, upon questioning, that she had been raped as a teenager, and her daughter was just beginning to date boys, about which she had tremendous anxiety.

Examination revealed a poor quality of motion of the lower lumbar spine, sacrum, innominate bones, and respiratory and pelvic diaphragms. The pelvic viscera, uterus, and rectum were also restricted in motion. Likewise, the cervical spine and cranium demonstrated diminished amplitude of the primary respiratory mechanism.

Treatment addressed these restrictions of motion. As the respiratory and pelvic diaphragms were treated, the patient began to cry. Once released, these diaphragms also facilitated the motion of the other areas of restriction. The patient also reported that she felt relieved.

The patient was referred for psychological counseling, and she returned for four weekly sessions of OMT. Her spirits improved, and her subsequent visits diminished in frequency. The headaches, constipation, and pelvic pain cleared, and as she continues in counseling, she is more accepting of her sexuality and that of her husband and daughter.

D. CASE 4: **ADHD IN A 4-YEAR-OLD MALE**

A 4-year-old boy was terrorizing his home and preschool environments. His teacher demanded that the child be placed on medication to control his outbursts of disruptive behavior.

Upon questioning, the mother related that the child's birth was traumatic. Meconium was present, and the child needed resuscitation. After birth, the boy's head protruded on one side. The mother reported that he slept for only short periods of time and cried each night. He seemed to be very intelligent, although he was slow to walk and talk. His energy never seemed to diminish.

While the interview proceeded, the child chased around the room touching one item after another. His mother seemed oblivious to his excessive activity, saying that he is a very loving child.

To keep him still enough for an examination, the examiner used a toy to entice the child on to the examiner's lap. The compression of the cranium became immediately obvious upon placing hands there. With persuasion, the child was placed on the examination table and a maneuver to release the cranial base, *condylar decompression,* was achieved (See Section VI). No further treatment was attempted during that visit.

Returning 1 week later, the mother reported that the child's teacher had said the child had fewer behavior problems early after treatment, but that to the class, he had been just as disturbing as ever in the last few days. The mother said that the night following the first treatment, he had slept through the night for the first time in his life. Lately, however, he had returned to his former pattern of staying up at night crying.

Another attempt at treatment was met with more cooperation; the child seemed to know that he would feel better. Subsequent treatments were characterized by progressively improved cooperation, improved reports of behavior at home and school, and less erratic behavior in the treatment sessions. When the cranial compression improved, treatment frequency was reduced to monthly sessions. At the monthly sessions the mother reported that she knew it was time for another treatment by the way the child was beginning to behave prior to the visit.

He continues to receive treatment at age 10 on an infrequent basis when his mother notices behavior changes after a fall or other incident. He does well in school, has friends to play with, and takes no medication.

E. CASE 5: MIGRAINE CEPHALGIA AND MENOPAUSE

A 50-year-old female presented with the complaint of debilitating headaches, which had been occurring only prior to her menses, but now that she had become menopausal, they were occurring every week. She was becoming unable to cope and to continue her life in the manner to which she was accustomed. She had to stay in bed for several days a month. She characterized herself as needing exercise to keep herself from getting "blue," and now she found herself unable to exercise and spiraling into a progressively deeper depression.

Her history included having been raped when she was in her early twenties. Her attacker had punched her in the stomach, causing her to nearly pass out. She remembered little of the remainder of the attack. She noticed that shortness of breath had plagued her when she participated in any activity that

exceeded a gentle walk. She reported that she was counseling with a psychologist for the depression. This counselor was someone she had seen years before when she was dealing more acutely with the rape.

Examination of the diaphragm revealed a diminished respiratory excursion and motion of the primary respiratory mechanism. The mediastinum demonstrated traction from the right diaphragm to the right hyoid bone and anterior cervical fascia. The right cranial base was drawn caudad compromising the motion of the right temporal bone in relation to the sphenoid bone. At the sphenosquamous suture, where the middle meningeal artery crosses from the squamous temporal to the greater wing of the sphenoid, a compression was evident.

Treatment was directed toward the very tense diaphragmatic musculature, using firm pressure with the fingertips at the falciform ligament to obtain some measure of relaxation. With this pressure, the patient experienced discomfort that was quite significant. Suddenly, the tension dissipated, and the patient coiled, as a spontaneous contraction of the abdominal muscles occurred. She just as suddenly relaxed back onto the treatment table and took in a spontaneous gasping breath, which was immediately followed by a cry of anguish and subsequent sobbing.

As the sobbing diminished to quiet tears, treatment of the cranium was carried out. A release of the right-sided compression was accomplished, and an easy smooth oscillation of the head followed. The cervical spine and sacrum were balanced, and by this time the patient was no longer crying. She exclaimed that she felt lighter all over and could breathe more freely than at any time she could remember since the rape. She said she could see colors more brilliantly and felt a "terrible load" had been lifted.

In follow-up 3 weeks later, she reported that she had not had a headache for the weeks after the first treatment, but that now her back was feeling painful, especially at the left hip. She reported that she could breath more easily when climbing stairs and felt more secure in her apartment. In her last counseling session with her psychologist, she remembered the rape in more detail. She recalled that her attacker pushed her onto a park bench face down, and her left hip was caught on the seat back. She recalled that she had left hip pain for several weeks after the rape, until she finally went to a chiropractor.

Upon examination, the diaphragm remained somewhat tense, although much improved, but the right psoas muscle was tense from the diaphragm down to the right lesser trochanter, drawing the right innominate cephalad. The left innominate was drawn laterally, creating a tension in the connective tissues, from which she reported pain.

The psoas muscle was released, and the patient expressed more tears, although this time the emotions were not so intense.

Three more weekly sessions balanced the patient's body, whereupon she was instructed to return for maintenance treatments every month or two. A month later, she reported no more headaches and a much more settled life. She said she felt happier and that the psychologist had said to follow up monthly.

VI. TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

The descriptions of the primary respiratory mechanism given in this chapter are, out of necessity, brief and incomplete and therefore can be subject to misinterpretation. Extended periods of time, study, and experience are required to develop the skills necessary to appreciate what is so simply put in this chapter. For complete information, it is recommended that one pursue training in the field by taking one or more basic courses and by working with a preceptor.

For the osteopathic physician, abbreviated introductory courses in cranial osteopathy are part of the curriculum at all 19 colleges of osteopathic medicine. A few osteopathic colleges offer a 40-hour basic course, similar to the ones presented by the Sutherland Cranial Teaching Foundation and The Cranial Academy. In addition to a medical education, the 40-hour basic course provides sufficient training, but students often repeat the curriculum. Studying with a preceptor and in organized study groups safely guides the novice through a growth process in which clinical experience becomes the ultimate teacher. Clinical experience nourishes the practitioner's confidence by emphasizing that what he or she is feeling truly exists and by clarifying how the experience relates to structural aberrancy and healing. Years of experience may be necessary to acquire such skill. Frequently, those who limit their practice to cranial osteopathy have concentrated their efforts on building their skill to a higher degree.

The Cranial Academy grants membership to applicants who are MDs, DOs, and DDSs who successfully complete a basic 40-hour course. Student fellows in osteopathic manipulative medicine (OMM) extend their undergraduate education an extra year to learn in depth, see clinical patients, and teach in the OMM department at their college. Residents in OMM often prepare well for the practice of cranial osteopathy; however, they might emphasize other forms of OMM and de-emphasize cranial osteopathy.

Fellows of the American Academy of Osteopathy (FAAO) are awarded the highest achievement possible in the field of manual medicine. After qualifying by demonstrating service to the American Academy of Osteopathy, the candidate submits a thesis and case histories, and passes written, oral, and practical examinations. Holders of the FAAO are leaders in the education, research, and practical application of the principles of osteopathic medicine. They may be the best qualified in the field of cranial osteopathy, if they utilize the modality.

The single best indicator of qualification is the certificate of competency, which is awarded by The Cranial Academy to those who have 3 years of clinical experience and pass written, oral, and practical examinations.

Osteopaths outside the United States are usually not fully licensed physicians and are therefore excluded from full membership in The Cranial Academy and from the opportunity to receive the certificate of competency. However, any physician holding full practice licenses from anywhere in the world is eligible for both. Of course, individuals who hold limited licenses may have excellent skills and knowledge, but it is not guaranteed by standard measures of competency mentioned above. CranioSacral Therapists may receive certificates from the Upledger Institute. These certificates award accomplishment, which is a therapy rather than a form of medicine. The skills and knowledge base of certified Craniosacral Therapists are not equivalent to those of certified physicians.

VII. RESOURCES

A. LIST OF ORGANIZATIONS

The Cranial Academy, 8202 Clearvista Parkway, Suite 9-D, Indianapolis, IN 46256, (317) 594-0411, fax: (317) 594-9299; e-mail: CranAcad@aol.com. This organization teaches, advocates, and advances cranial osteopathy. The Cranial Academy grants membership to applicants who have satisfactorily completed a basic course of osteopathy in the cranial field taught by The Cranial Academy or the Sutherland Cranial Teaching Foundation. The academy offers names of its members as referrals to the public and to physicians. The Cranial Academy publishes a quarterly journal, a bibliography, and various books. The academy awards a certificate of competency. It is a component society of the American Academy of Osteopathy.

The Sutherland Cranial Teaching Foundation, Inc., 4116 Hartwood Dr., Fort Worth, TX 76109. This not-for-profit, independent organization, established in 1953 by Dr. Sutherland, provides the basic course in osteopathy in the cranial field, which is the standard in the field. This organization also supports research, produces publications, and offers continuing studies courses.

The American Academy of Osteopathy, 3500 DePauw Boulevard, Suite 1080, Indianapolis, IN 46268, (317) 879-1881, fax: (317) 879-0563, dfinley@academyofosteopathy.org. As an affiliate organization of the American Osteopathic Association (the equivalent of the AMA), the AAO seeks "to teach, advocate, advance, explore, and research the science and art of osteopathic medicine." Essentially, it carries the banner of osteopathy for the profession. It is the recognized world authority for osteopathic manipulative medicine. The Cranial Academy is a component society of the AAO.

The Gibson D. Lewis Library, University of North Texas Health Science Center at Fort Worth, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107, (817) 735-2491, fax: (817) 763-0408. This library, located at the site of the Texas College of Osteopathic Medicine, contains the National Osteopathic Literature Database and is the source for osteopathic literature.

A. T. Still Memorial Library, Kirksville College of Osteopathic Medicine, 800 West Jefferson, Kirksville, MO 63501, (660) 626-2345, www.kcom.edu. This library contains unique publications and historic documents, to be found nowhere else, about osteopathy and cranial osteopathy.

Still National Osteopathic Museum, National Center for Osteopathic History, Kirksville College of Osteopathic Medicine, 800 West Jefferson Street, Kirksville, MO 63501, (660) 626-2359, museum@kcom.edu. This museum, on the campus of the mother school of osteopathy, contains artifacts of A. T. Still, MD, the founder of osteopathy, and W. G. Sutherland, DO, the originator of the cranial concept, which tell a story that no words can describe.

The Upledger Institute, West Palm Beach, FL. This private, for-profit organization, named for its founder, teaches nonphysicians "CranioSacral Therapy," a copyrighted term by John Upledger. CranioSacral Therapy is used as a technique only. Courses offered by this organization do not receive continuing education credits from osteopathic or medical

organizations, in distinction from those courses offered by The Cranial Academy and The Sutherland Cranial Teaching Foundation.

B. ANNOTATED LIST OF HELPFUL PUBLICATIONS

Sutherland, W. *G.* (1939). *The cranial bowl.* Mankato, MN: The Free Press Co. 140 pages. This is the original work, a concise introductory treatise by W. *G.* Sutherland about the cranial concept. It may be obtained from The Sutherland Cranial Teaching Foundation and The Cranial Academy (see the List of Organizations).

Sutherland, W. G. (1998). *Contributions of thought* (2nd ed.). A. S. Sutherland and A. L. Wales (Eds.). Portland, OR: Rudra Press. 364 pages. This is a comprehensive, chronological collection of the writings, lectures, and speeches by Sutherland that pertain to the art and science of osteopathy in the cranial field, covering the years 1914-1954. May be obtained from The Sutherland Cranial Teaching Foundation and The Cranial Academy (see the List of Organizations).

Sutherland, W. *G.* (1990). *Teachings in the science of osteopathy.* A. L. Wales (Ed.). Portland, OR: Rudra Press. 3 1 1 pages. This book is edited by one of Sutherland's closest students and fellow teachers. It consists primarily of edited lectures Sutherland delivered in 1949 and 1950. It organizes the material according to topic without considering chronology.

Sutherland, **A.** S. (1962). *With thinkingfingers.* The Cranial Academy. 99 pages. This is a personal account from Mrs. Sutherland of her life with W. *G.* Sutherland while he was developing the cranial concept. It offers insights into the thinking of Dr. Sutherland from a caring and objective observer. It may be obtained from The Cranial Academy (see the List of Organizations).

Magoun, H. I. (1976). *Osteopathy in the cranialfield* (3rd ed.). The Sutherland Cranial Teaching Foundation. 367 pages. This is the text approved by Sutherland and still used today as the reference in the courses taught b y these two organizations. There is extraordinary detail of anatomy, function, and treatment. This is the most authoritative work on the subject of the cranial concept. It may be obtained from The Sutherland Cranial Teaching Foundation and The Cranial Academy (see the List of Organizations).

King, H. H. (Ed.). (1 999). *A bibliography of research related to osteopathy in the cranial field.* Version *1.* Indianapolis, IN: The Cranial Academy (see the List of Organizations). This is a list of more than 300 references from the medical and scientific literature supporting the cranial concept. In many cases, these authors have no conception of the primary respiratory mechanism. The research nevertheless provides supporting evidence for the five phenomena.

Fulford, R. C. (1996). *Dr. Fulford's touch of life, The healingpower of the natural life force with Gene Stone.* New York: Pocket Books. This most easily understood work, intended to help the lay public understand cranial osteopathy and osteopathic philosophy, is Dr. Fulford's personal story told in his own words and written by Gene Stone. The foreword is by Andrew Weil, MD, who wrote about Dr. Fulford in Weil's bestseller, *Spontaneous Healing.*

The Cranial Letter is the official publication of The Cranial Academy (see the List of Organizations) for its members. It is published quarterly. It contains news and editorials as well as scientific articles pertaining to cranial osteopathy.

The AAO Journal is the official publication of the American Academy of Osteopathy (see the List of Organizations). It is published quarterly, and it is a peer-reviewed journal of osteopathic literature, pertaining to osteopathic philosophy and OMT in general, with some articles about cranial osteopathy.

VIII. REFERENCES

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Levine, P. A. (1997). *Waking the tiger: Healing trauma.* Berkeley, CA: North Atlantic Books.

Pischinger, A. (1991). *Matrix and matrix regulation. Basis for a holistic theory in medicine.* H. Heine (Ed.). Brussels: Haug (Chausee de Ninove 1072, B-1080 Brussels).

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Chapter 4

Aromatherapy

Raphael d'Angelo, **MD**

Handbook of Complementary and **Alternative** Therapies in Mental Health

I. MODALITY OVERVIEW: DESCRIPTION, PHILOSOPHY, HISTORY, AND CURRENT TRENDS

A. INTRODUCTION

Complementary-alternative medicine (CAM) is enjoying ever increasing popularity. A study from the Stanford University School of Medicine found that most people who used CAM did so in conjunction with conventional therapy (Astin, 1998). Botanical medicine is a branch of CAM and consists of herbal medicine and aromatherapy. Herbal medicine involves the administration of the solid parts of plants (leaves, stems, flowers, roots, etc.) to support health and treat disease. Aromatherapy is concerned with the volatile oils of plants.

B. DEFINITION

Aromatherapy, also known as aromatic medicine, is the art and science of using plant oils for health, well-being, and medical treatment. The oil is volatile because it evaporates in air. It is called an essential oil because the oil is the very essence, the lifeblood if you will, of the plant. Contained within the oil are hundreds of chemicals. Knowledge of these chemicals and their actions on the body, mind, and spirit allows the aromatherapist to select various oils to varying degrees to treat a multitude of conditions.

The essential oil is made in special cells of the plant. The oil serves many functions including chemical signaling, insect attraction and deterrence, nourishment, neutralization of infectious agents, and cellular repair. These properties are the result of the types of chemical constituents within a given essential oil.

Various methods are used to obtain the oils from raw plant material. Steam distillation is the most common procedure. The proper parts of the plant are placed in the distiller apparatus and heat is applied. The oil leaves the plant and is carried into a tube or coil where it is cooled, condensed, and collected. Other methods used include ethyl alcohol extraction for oils like rose and jasmine and cold pressing for the citrus oils such as lemon and bergamot. It is important to keep in mind that growing conditions will greatly influence the chemical mix of the oil. The condition of the soil, amount of sun and rainfall, and the temperatures and timing of the harvest relative to the growth cycle of the plant will have a bearing on the quality and suitability of the oil. Reputable companies that sell medical-grade oils will provide on

request a chemical analysis for each oil they sell. One of the problems in the research literature for aromatherapy is that the chemical content of a given oil will vary, giving inconsistent results at times. It is therefore necessary that researchers know the exact chemotype of their oils so that standard comparisons can be made.

C. HISTORY

Far back in antiquity plants were used in many aspects of daily life. They were intertwined with religious ceremonies, public health, and beauty. The Vedic texts of India list many aromatic substances and their uses (Damian & Damian), 1995). In Mesopotamia, physicians burned plants and had the sick inhale the vapors (Lyons & Petrucelli, 1987). The Bible mentions the use of oils. Frankincense and myrrh were brought as gifts to the baby Jesus. The Hebrews used oils for anointing kings and for preparation of bodies for burial. The ancient Chinese writings give many explicit details for the medicinal use of herbs. They used them for teas, ingestion, and inhalation to effect balance and the movement of Qi.

The Egyptians developed an elaborate system of herbology. Those plants not grown locally were imported. One of the more well-known herbs was cedanvood, which was used medicinally as well as for beauty (Allardice, 1998). Perfumery had its start in Egypt as well. The rituals for the dead incorporated herbal oils, which may have retarded putrefaction. Egypt exported its knowledge of perfumery and herbology to the rest of the ancient world. Greece and Rome were benefactors of Egypt's herbal gifts.

History gives the credit for medicinal plant distillation to Avicenna (A.D. 980-1036). Born in Persia, he wrote the famous "Canon of Medicine," which is still used in areas of the Middle East today (Lyons & Petrucelli, 1987). From this point in time, many plants were distilled and perfumery took off. Knowledge of the medicinal properties of essential oils was still in its infancy, but it had its proponents. During the black plague it is said that the two professions least likely to come down with the plague were doctors and perfumers, both exposed to heavy doses of antimicrobial essential oils.

Modern aromatherapy was born in the chemistry laboratory of Rene-Maurice Gattefosse (1881-1950). He was a chemist and perfumer who accidentally burned his hand and plunged it into the nearest container of liquid, which happened to be lavender oil. To his amazement, the burn healed rapidly and without scarring. This incident diverted his research from perfumery

to the medical applications of essential oils. The culmination of his research was the publication of his book, *Aromatherapie,* in 1937. The title became the identity for this field. Other aromatherapists soon followed suit. The French military surgeon Dr. Jean Valnet did field research with essential oils during and after the Indo-China war. In his classic book, *The Practice of Aromatherapy,* Valnet detailed treatments for wounds, infections, and many other conditions.

As we enter a new century, aromatherapy is becoming one of the fastest growing modalities in CAM. This is in part due to the availability of pure, medicinal-grade essential oils and also a result of many, trained or not, who use these oils in their professions. Aromatherapy is also transitioning from a wide base of experiential knowledge to a small core of scientific research. Going forward, we will see a blending of the old aromatic arts and the new science into a formidable health care discipline.

D. PHYSIOLOGIC INTERCONNECTIONS OF SCENT

The human brain is capable of detecting thousands of different odors at very small parts per million concentrations. As odor molecules enter the nose they are carried upward by air currents to olfactory cells located at the top of the inner nasal chamber. There the odor combines with a protein on the olfactory cell, and a message is sent via the olfactory nerve to the limbic system and the hypothalamus where input from the five senses are sorted out and basic human drives are initiated. Through interconnecting pathways there is further stimulation or inhibition of the endocrine system, the immune system, and higher cortical functions. Essential oils can enter the body not only through the nose but also by inhalation, diffusion across mucous membranes and through skin. Ultimately, hundreds of chemicals in a typical oil eventually enter the bloodstream and are carried to all parts of the body including the brain. The combination of neural stimulation by aroma and a corresponding chemical action in the blood can have a powerful influence on mood and behavior.

Before leaving this section, a few words about pheromones are in order. These are chemical signals that are secreted by animals and humans. They transmit important basic instinctual information, such as sexual attraction1 repulsion between members of a species. The pheromone receptor is the vomeronasal organ (VNO), a separate sensory organ located close to the nasal opening. The role of the VNO in humans is controversial. The action of essential oils on the VNO and behavior has yet to be researched.

II. **RELEVANCE FOR MENTAL HEALTH: RELATIONSHIP TO PSYCHOLOGICAL** (MENTAL/EMOTIONAL) **DISTRESS**

A. NEUROIMMUNOENDOCRINE (NIE) **CONNECTIONS AND STRESS**

Essential oils commonly enter the body by transdermal application and inhalation such as with an aromatic oil massage. The olfactory nerve is also stimulated by the firing of olfactory nerves. Certain compounds in the oil activate receptors in the limbic system, which results in the release of neurotransmitters such as serotonin, endorphin, and norepinepherine (Fischer-Rizzi, 1990).

Other compounds activate hypothalamic receptors resulting in a heightened discharge of neurotransmitters that potentiate the hypothalamic pituitary axis (HTP) and the neuroreceptors on certain cells of the immune system. Thus, the network is present for aromatic compound neuromodulation of the brain and the entire endocrine system on the one hand and immune response on the other.

Maladaptive cellular and behavioral responses to environmental adversity constitutes a chronic dysfunctional stress response and often plays an important role in the treatment of mental health conditions. Essential oils can help in treatment by providing neurochemical responses that lead to relaxation. Essential oils can also be coupled with a visualization meditation relaxation exercise. Over time, the scent of the oil alone may induce the physiologic state of relaxation. This is very useful in anxiety states and attention deficit/hyperactivity disorder (ADDIADHD).

B. **ESSENTIAL OILS IN THE CONTEXT OF CLINICAL TREATMENT**

The mental health conditions that are being examined in the light of aromatherapy are depression, anxiety, ADDIADHD, and addictions. Depression is widely seen in general medicine and psychiatry. It varies in severity from mild, brief bouts of sadness to full-blown psychotic depression. Essential oils can offer first-line therapy for those who are mild to moderately depressed and as adjunctive therapy for the more severe cases. The same holds true for the anxiety states. The use of essential oils may be tried as singular therapy for mild to moderate anxiety states. ADD/ADHD lends itself to rather

interesting treatment with essential oils because of the rapid effect on mood and behavior, making them either primary or adjunctive treatment. Addictive behaviors such as alcoholism and psychoactive substance abuse may benefit from adjunctive essential oil therapy. With NIE stimulation and the secretion of endorphins, essential oils have a place in the long-term treatment of these conditions.

C. BASIC CHEMISTRY OF ESSENTIAL OILS

The clinical action of an essential oil is due to its chemical content. At this point, some basic information is necessary for a more complete understanding of medicinal aromatherapy. A clinical effect from an oil can be anticipated with a knowledge of the major chemical compounds in the oil. Space precludes anything but a superficial treatment of this concept. If you take an essential oil whose principal compound results in sedation and you mix it with another oil that has the same compound, you will achieve a synergistic response with a good deal more sedation than if you gave to the client either one alone. This principle of synergy is used often in aromatherapy to enhance a desired result. Conversely, when two or more oils that have different chemical makeup are blended together, the effect may be more subtle and spread out over many tissues and organs.

Nature's pharmacy has a diverse field of chemical compounds. Through various processes of plant photosynthesis, carbon molecules are bonded together into chains of varying length. To these chains are added oxygen, hydrogen, nitrogen, and other molecules in differing amounts and positions on these carbon chains. The result is a plethora of medically active substances. The following are some of the more common compounds and their effects. Aldehydes such as citral found in *Melissa officinalis* are soothing, calming, and sedating. Aldehydes are also anti-inflammatory, antispasmodic, and anti-infectious. Alcohols are immunostimulative and have antibacterial and antiviral properties such as eucalypt01 found in *Eucalyptus globulus.* Esthers are antispasmodic, antimicrobial, and calming. Linalyl acetate found in oil of lavender is a good example of a compound that can provide sedation in a number of clinical settings. Other compounds, such as ketones, help heal wounds and reduce mucus production; phenols, which are stimulating to the nervous system, and oxides, which can soothe the respiratory tract. The beauty of aromatherapy is that, as Dr. Daniel Penoel, the noted French aromatologist put it, armed with a knowledge of what these chemicals do, one can go to any country and find indigenous plants that will perform up to clinical expectation (personal communication, May 2000).

D. METHODS OF ESSENTIAL OIL APPLICATION

The two most common ways of administering essential oils are by inhalation and by applying it to the skin. In some advanced aromatherapy practices, the oils are also given orally. Other routes of administration are intranasal, rectal, and vaginal. This section highlights the inhaled and dermal routes.

To give an essential oil by inhalation, the easiest way is to place a few drops of the oil on a gauze, cotton ball, or facial tissue, and instruct the client to hold it a few inches from the nose and mouth and breathe normally. This can be continued for whatever length of time is agreeable to the client. Most inhalation treatments last about 15 minutes. This method causes a rapid rise of the essential oil concentration into the blood and nervous system. For a more prolonged exposure to the oil with a gradual effect, a room diffuser is helpful. Ten to 20 drops of oil are placed into the diffuser. When turned on, a gentle mist of oil is carried on air currents throughout the room while the client is working or resting. A diffuser is very helpful when nighttime sedation is in order and to create a calm atmosphere for an ADHD child.

Transdermal application of essential oils requires two considerations. First, the oil is never used full strength on the skin. It is diluted in a carrier oil such as sweet almond oil or a vegetable oil. Second, it is important to ascertain that the client is not sensitive to the essential oil or the carrier oil. Several variations of the method can be used to test for sensitivity. A drop of the essential oil can be placed on the inner forearm and covered with a band aid. The same is done for the carrier oil. After 20 minutes, the band aids are removed and the sites are examined for redness, swelling, puffiness, and itching, any of which is an indication not to use that oil. There can be a delayed skin reaction, which can show up 24 to 48 hours later. The client is told to contact the office if any of the previously mentioned signs of skin sensitivity show up at either site in that time frame.

To use an essential oil on the skin, one mixes two or three drops of the essential oil with a tablespoonful of a carrier oil. Some other carrier oils are grapeseed, sesame, aloe vera, and jojoba. The diluted essential oil is massaged into any skin surface or used in a regular massage, which can be very relaxing.

E. ESSENTIAL OILS FOR DEPRESSION, ANXIETY, ADD/ADHD, AND ADDICTIONS

Oil selection for medical and psychiatric conditions has been more tradition than science. In the last decade there has emerged a more scientific

body of knowledge based on a new understanding of aromatic compounds and some small research studies. Some of the more common oils in use have been tabulated in Table I. Because space does not permit a more thorough discussion of the subtle differences among the oils that would favor one combination over another, the reader may obtain further information from aromatherapy texts (Price & Price, 1999; Worwood, 1996).

III. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

A. SAFETY OF ESSENTIAL OILS

1. Toxicity

Essential oils contain literally hundreds of different chemicals. The medical use of oils requires a working knowledge of essential oil toxicology. An excellent text on this subject is *Essential Oil Safety* by Robert Tisserand and Tony Balacs. Any oil can be used in a potentially toxic way. As little as 15 milliliters of a swallowed essential oil has been known to cause death (Tisserand & Balacs, 1995). Therefore, it would be appropriate to say that when used in the recommended amounts, medicinal oils are generally very safe. Some oils should never be used in medical aromatherapy because of one or more toxic compounds. Among these are oils of bitter fennel, buchu, mugwort, star anise, thuja, wintergreen, and wormwood. Bear in mind that in some cases very safe oils will have trace amounts of one or more toxic compounds but the concentrations are too dilute for clinically significant toxicity.

The concentration of a toxic constituent is only one aspect of essential oil safety. One must also consider the dose, frequency of dosing, the route of administration, the client's body mass, and detoxification capability. When recommending an oil or blend of oils for a client, these factors would be considered.

2. Proper Dosing

The most important consideration after selecting the essential oil for therapy is safe dosing. The client's general health and medical problems will play a role in dosing. A different dose would be recommended for someone frail and sickly versus someone in good health. For example, a young male in his

Table I
Essential Oils for Mood and Behavior

Common name	Latin name	Depression	Anxiety	ADHD	Addiction
Anise	*Pimppinella anisum*		X		
Basil	*Ocimum basilicum*	X	*X*	*X*	X
Bergamot	*Citrus bergamia*	X	*X*		
Clary sage	*Salvia sclarea*	X	*X*	*X*	
Coriander	*Coriandrum sativum*		X		
Creeping hyssop	*Hyssopus officinalis*	X			
Cypress	*Cupressus sempervirens*		X		
Fennel	*Foeniculum vulgare*				X
Frankincense	*Boswellia carteri*	X	*X*		
Garlic	*Allium sativum*				X
Geranium	*Perlagonium graveolens*	X	*X*		
Grapefruit	*Citrus paradisi*				X
Juniper berry	*Juniperus communis*	X	X		
Lavender	*Lavandula augustifolia*	X	X	X	
Lemon	*Citrus lemon*	X	X	X	
Mandarin	*Citrus reticulata*	X	X		
Melissa	*Melissa officinalis*	X	X	X	
Neroli	*Citrus neroli*	X	X		
Niaouli	*Melaleuca viridiflora*	X			
Nutmeg	*Myristica fragrans*	X			
Orange	*Citrus aurantium*		X	*X*	
Patchouli	*Pogostemon patchouli*	X	*X*		
Petitgrain	*Citrus aurantium*	X	*X*		
Roman chamomile	*Chamaemelum nobile*	X	*X*		
Rose	*Rosa damascena*	X	*X*		
Sandalwood	*Santalum album*	X	*X*	*X*	
Sweet marjoram	*Origanum majorana*	X	*X*	*X*	
Thyme	*Thymus vulgaris*	X	*X*		
Vetiver	*Vetiveria zizanioides*	X	*X*	*X*	
Ylang ylang	*Cananga odorata*	X			*X*

twenties with no medical problems would receive a full dose three times a day. In contrast, a woman in her seventies with multiple chronic medical problems who is underweight might receive one-fifth the young man's dose and take it twice a day.

Another aspect of dosing and safety is the prevention of accidental poisoning. Small children are prone to investigate a small bottle with an alluring aroma. Child-proof caps not withstanding, keep all essential oils well out of the reach of children. Be sure that the purchased oil has an orifice reducer so that only a drop at a time can be dispensed. If a child has consumed an essential oil, contact the local poison control center without delay.

3. Essential Oil Purity

Safety in medical aromatherapy can be compromised by adulterated oils. Unscrupulous people will add hard-to-detect substances in order to make more profit. Reputable companies buy from honest growers and distillers and will certify that the oil is pure and genuine. An essential oil is said to be pure if it contains no additions or deletions from its natural content. It is genuine if the exact plant genus and species are assured. Buy the oils in small amounts. Store in amber bottles away from light and keep the caps on tight to retard oxidation of the oil.

4. Phototoxicity

Because a significant amount of aromatherapy is combined with direct skin application or massage, consideration must be given to the prevention of phototoxicity, which manifests as a rash with inflamed patches of itchy skin and, rarely, skin swelling and sloughing. Some essential oils are problematic in this regard, notably oils from the citrus family including lemon, orange, grapefruit, tangerine, and bergamot. When used in very dilute concentration there is usually no problem. **A** phototoxic reaction can be avoided altogether if the client avoids sun and UV ray exposure for 12 hours after application (Tisserand **&** Balacs, 1995).

B. COMPATIBILITY WITH STANDARD MODALITIES OF TREATMENT

1. Prescription Drugs

Some essential oils act as monoamine oxidase (MAO) inhibitors due to the chemical myristicin, which is present in significant quantities in the essential oils of parsnip, parsley leaf, parsley seed, and to a lesser extent in oil of nutmeg (Tisserand & Balacs, 1995). It would be advisable to avoid these oils with patients on MAO-inhibitor medications.

2. Other Therapies

Currently there are no contraindications for concurrent use of essential oils with psychotherapy, biofeedback, and other modalities. Essential oils may enhance the relaxation response and thus be of value adjunctively.

3. CAM

With few exceptions, essential oils are compatible with herbal therapy, homeopathy, flower essence therapy, and acupuncture.

C. CONTRAINDICATIONS

Standard aromatherapy texts list essential oils that can worsen certain medical conditions. Space does not permit a thorough discussion of this topic. However, a representative sampling of conditions and contraindicated oils is presented.

Epilepsy-eucalyptus, lavender, rosemary, basil, fennel, sage
Hypertension - thyme, rosemary, pine, sage
Asthma-rosemary, camphor
Pregnancy - lemon balm, cinnamon, basil, thyme

There are many more oils and conditions that the aromatherapist must take into account when making a therapeutic decision.

Aside from oils that would aggravate or harm a client's condition, there are two other considerations that may preclude use of an aromatherapy approach. The first has to do with the client's acceptance of such a program of treatment. Although most people readily agree to try essential oil therapy, there are those who will reject it on the basis of personal preference, time involved, or expense. The second reason not to use aromatherapy rests with the bias of the practitioner who may lack the training or have little interest or confidence in this modality. Finally, there may not be a reputable aromatherapist to whom the client can be referred.

IV. RESEARCH EXPERIENCE, LEVEL OF SCIENTIFIC DOCUMENTATION-RATED 0-6

A. INTRODUCTION

Aromatherapy has evolved over the centuries from ritualistic, empirical, experiential knowledge that was taught by apprenticeship to a more

scientific and disciplined aspect of CAM therapy. Right now, there is a dichotomy in the literature. On the one hand, you have a small circle of aromatherapy clinicians and researchers worldwide who are attempting to raise the standard of scientific scrutiny. On the other hand, there are those who publish case reports and other experiences on the use of essential oils that validate observational trends but are not of themselves sufficient information on which to base a standard for aromatherapeutic treatment. Problems arise when an essential oil is given to someone in a clinical setting. There is the usual and expected action of the oil, but an opposite action may occur due to the expectations of the subject. The oil may have a pleasing aroma aside from its actions and evoke memories that have a bearing on the outcome (Kirk-Smith, 1995). In the aromatherapy literature there are many different properties attributed to the same oil, giving evidence that the knowledge base in this field is inconsistent (Vickers, 1997). In a review of all randomized controlled trials of aromatherapy from various databases, 6 of 12 had no independent replication and in the other 6, the essential oil studied was combined with massage, making it difficult to control for the effect of the massage alone (Cook & Ernst, 2000).

B. BASIC RESEARCH

In a mouse model, oils of rose, neroli, sandalwood, and lavender or placebo were inhaled over a 1-hour period. The mice were notably sedated. Using some oils notable for stimulation, the mice were more active than at baseline (Buchbauer, 1993). *In Aromatherapy for Health Professionals,* second edition, the authors reported on a personal communication from Michael Shipley, a neurophysiologist at Cincinnati University. The olfactory nerve can activate two separate brain areas. It is suggested that the locus cerulus releases noradrenaline under the influence of stimulating oils such as peppermint. The raphe nucleus can make serotonin when stimulated by sedating oils like lavender. Boyd studied the expectoration properties of some essential oils, and noted that very faint doses by inhalation produced expectoration and higher concentrations diminished the effect (Boyd & Sheppard, 1985). At the 98th General Meeting of the American Society for Microbiology, a paper was presented on the antibacterial effect of various essential oils on culture isolates of *Streptococcus pneumoniae,* a bacterium capable of severe infections. It was found that a number of oils not only inhibited the growth of this organism but also caused bacterial cell wall destruction like certain antibiotics (Horne, 1998).

There have been some studies in the area of brain wave response to essential oil aromas. Electroencephalogram (EEG) mapping of brain areas and frequencies has been conducted by several investigators. Klemm *et* al. in 1992 published an investigation on the EEG effect of essential oils on a cohort of young women. The study showed a wide variation in the EEG patterns to the oils. Everyone reacted to at least some of the oils, and the most intensity was in the theta wave region. Oils used were lavender, peppermint, jasmine, birch tar, galbanum, heliotropine, and lemon. There was no response on the EEG from subjective effects of the aromas on the study participants. Alertness and enhanced visual attention was the subject of another essential oil study. Those that showed EEG activation included basil, neroli, peppermint, and ylang ylang (Tori *et al.,* 1988).

In a more recent study, EEG activity, alertness, and mood were assessed in 40 adults using lavender (sedating) and rosemary (activating). Computational skills were assessed before and after exposure to each of the two oils. EEG tracings showed drowsiness after lavender and alertness after rosemary. Computational skills improved after both oils and were more accurate after the rosemary oil (Diego *et al,* 1998).

A number of studies have looked at the effect of oils on mood and behavior. In mice, locomotor activity increased when exposed to oil of rosemary containing 39% 1,8-cineole (Buchbauer, 1988). Attention span and visual alertness were increased when subjects were exposed to peppermint oil (Parasuraman, 1991). Peppermint oil has also been given to sleeping subjects monitored for heart rate and muscle and brain wave activity with significant differences noted from baseline (Badia, Wesensten, Lammers, Culpepper, & Harsh, 1990).

C. CLINICAL STUDIES

There have been studies of aromatherapy paired with massage. In patients suffering from dementia, massage alone and massage with aromatherapy were studied. Of the four who completed the study, only one participant in the aromatherapy plus massage group benefited, and two participants showed an increase in agitated behavior (Brooker, Snape, Johnson, Ward, & Payne, 1997). Lavender oil has been used as the massage oil in a number of studies. Postoperative heart surgery patients were massaged with two different species of lavender oil. There were no significant differences between the oils and perhaps some difference in patient well-being from the massage (Buckle,

1993). In children with HIV, the effect of aromatherapy massage was studied as a way of improving the relaxation response and reducing stress (Vickers, 1997). Children with developmental disorders have shown improvement in relaxation with inhaled aromatherapy (Sheppard-Hanger & Stokes, 2000). Sedating oils such as lavender and melissa were used to reduce epileptic seizures by the association of the essential oil inhalation with relaxation in subjects with a long enough aura to accommodate this technique (Betts, 1994). Itai *et al.* (2000) examined depression and anxiety scores in 14 patients undergoing chronic hemodialysis. Aromatherapy with hiba oil and lavender oil resulted in reduction of depression scores and anxiety scores respectively. Anxiety about having an MRI scan was significantly reduced with heliotropine scent that had the effect of creating a more relaxed state (Redd *et al,* 1994). In another intensive care setting, Stevensen (1994) performed massage with either neroli oil or vegetable oil as a foot massage on 100 patients. The neroli oil massage reduced anxiety to a statistically significant degree. Disturbed sleep in a hospital setting was addressed with aromatherapy in this 1996 study by Cannard. Sleep patterns improved and the requirement for pharmacologic sedation was reduced. Minimizing preoperative anxiety using a number of CAM therapies including aromatherapy was reviewed in a nice article from the University of Colorado (Norred, 2000). Case reports make up a significant part of the aromatherapy literature. Panic attack therapy in two patients using a number of blended essential oils with successful outcomes was presented (Cleary, 1999).

D. CURRENT PROBLEMS/FUTURE TRENDS

Aromatherapy is in its research infancy with few controlled randomized trials. Results have been inconsistent but the use of aromatherapy by the untrained and the professional has accelerated nevertheless. Problems exist with placebo control and the expectations of the researchers and the subjects (Kirk-Smith, 1995) and with the design and reproducibility of clinical trials (Cooke & Ernst, 2000). On a research ratings scale of 0-6, the research base is in a range of 3-5. With the advent of CAM as a viable addition to medical therapeutics we will see more acceptance of such study protocols and involvement of academic institutions in further defining the role of aromatic medicine in this century.

V. SIMPLE TREATMENT: COMMON TREATMENT APPROACHES FOR DEPRESSION, ANXIETY, ADD/ADHD, AND ADDICTIONS

A. OVERVIEW

There are as many approaches to the treatment of mood and behavioral problems as there are aromatherapy practitioners. Each advises based on training and experience, which make up one's clinical comfort level. For some it is internal oral administration of essential oils. Others employ massage and aromatherapy. Still others rely on inhalation or some combination of techniques. Regardless of the method of application, there is no one right way for this is a field in which experimentation is still the norm. The following cases are designed to give some insight into the thought processes of the aromatherapist facing a clinical situation. It is not the intent of this chapter to bring the unfamiliar reader to the point of incorporating aromatherapy into clinical practice.

B. DEPRESSION

Depression comes in many forms with variable intensity. One thing is for sure-people who have it suffer. Aromatherapy can aid in the recovery from depression because there are essential oils that have combinations of stimulating, sedating, and tonifying compounds that help to alleviate depressed mood, aid in sleep, and balance nervous system activity. Table I shows some of the more commonly used essential oils for the conditions under discussion. The client is a 45-year-old male who lost his wife 2 years ago. He was on antidepressant medication but stopped it 6 months ago when his insurance ran out. He has hypertension and occasional bouts of asthma. His energy level is fair and he has not been sleeping well. He is not suicidal. He is consulting an aromatherapist on his own referral for help with feelings of sadness and trouble sleeping.

Noting his medical problems, the therapist would want to stay away from essential oils that may exacerbate his hypertension such as hyssop or thyme. Taking his asthma into account, the therapist might select oil of lemon, which is antiasthmatic, antispasmodic, and antihistaminic as well as having antidepressant action. For sleep, consideration could be given to the antidepressant lavender for its ability to reduce stress and promote sedation. Frankincense might be helpful with the prolonged grief. The next phase is

to have the client perform an aroma scent test by smelling each oil for personal acceptance or rejection. If a blend of oils is to be used, the client would also sniff-test the blend. In his case, a blend of oil of lemon and oil of frankincense is made up with 20 drops of lemon and 5 drops of frankincense. The client is instructed to use 4 drops of the blend on a handkerchief and inhale every two hours while awake for 5-10 minutes, using fresh drops each time. He is shown how the blend is made so he may make more as needed. Freshness of therapeutic oils is necessary. For sleep, the client is instructed to place a few drops of lavender into a small electric diffuser and run it at the bedside during the night. On return one week later, the client tells his therapist that he has a little more energy, is sleeping better, and feels slightly more hopeful. He is seen at intervals of 2 weeks over the course of his **3** months with the aromatherapist and adjustments to his program are made. Close monitoring and oil substitutions or additions are typical as mood and behavior changes.

C. ANXIETY

This client underwent the horrors of a tornado, which ripped through her small town barely missing her home. She helped find two neighbors who were dead under the wreckage of their home. It has been 6 months. She cannot sleep, except for a few hours at a time. She has nightmares and finds herself irritable and nervous most of the time. Some improvement has been noted since she began taking 40 milligrams of Paxil a day. There are no medical problems. This client is not sure how aromatherapy can help but knows she cannot go on feeling this way. She could certainly benefit from psychotherapy, stress reduction techniques, possibly further supportive prescription therapy, and other CAM modalities. The aromatherapist must decide which aspects of her clinical presentation would lend themselves to aromatic treatment. Two areas are immediately obvious. Aromatherapy can help with sleep, stress reduction, and anxious mood. The nightmares might be helped with oil of cedarwood, which has been reported to have some effect on dreams (Worwood, 1996). Lavender oil is anxiolytic and sedating. Therefore, after passing the aroma sniff test, she is asked to diffuse at bedtime a blend of these two oils using two-thirds lavender and one-third cedarwood. For daytime irritability, nervousness, and stress reduction, the aromatherapist recommends a 50:50 blend of two anxiolytic and sedating oils sweet marjoram, and melissa (also known as lemon balm). This blend can be diffused in a room or inhaled directly. On the next visit, after patch-testing this blend, she is introduced to aroma massage using her blend in

sweet almond oil. Finally, she is encouraged to take a relaxing bath with candlelight, soft music, and three drops of sandalwood in the water. With anxiety, the aromatherapist proceeds stepwise and gently introduces new aspects of therapy.

D. ADD/ADHD

The school has suggested that Mark see his pediatrician for a Ritalin prescription because of his poor attention span, class disruptions, and inability to sit still. His mother resists putting him on prescription medication without another opinion. She seeks out a consultation with a holistic aromatherapist. The initial evaluation suggests probable ADHD, and Mark is otherwise healthy. Along with a discussion about food allergies and heavy metal toxicity testing, Mark is asked to help choose some essential oils by scent. He does not like lavender or vetiver, but he has a positive reaction to melissa, basil, and orange. Because the citrus family is rich in aldehydes, which are calming, orange is one of the oils selected. Melissa, an anxiolytic and sedating oil as well as a nervous system balancer, is also chosen. Mark's mother is instructed to make a 50:50 blend of these two oils and to place a few drops on a cotton ball, which is stuffed into a small pop-top plastic container for him to open and inhale frequently. It proves to be helpful.

E. ADDICTIONS

A 35-year-old male has been receiving acupuncture for a long-standing substance abuse problem. He has been free of drugs and alcohol for 5 weeks. He has fatigue, a history of migraine headaches, trouble concentrating, terminal insomnia, and an abnormal liver detoxification profile. An aromatherapist is brought on board to help with his symptoms. Essential oils that have been noted to help with addictions are fennel, garlic, grapefruit, and ylang ylang. With detoxification problems, fennel will not be used due to its phenolic ether content. Oil of garlic would be useful for both addictions and headaches. Oil of grapefruit can help with fatigue and insomnia. Ylang ylang oil is helpful for headaches and is sedating. For the sleep disturbance, a bedtime blend of oil of melissa and lavender in a 50:50 ratio is recommended. During the day, one drop of garlic oil in a teaspoon of grapeseed oil is to be massaged into the soles of both feet. The oil of grapefruit is for inhalation by room diffuser or on a cloth. Adjustments are made over the course of therapy.

F. SUMMARY

Many factors enter into the decision-making process. It is similar to a dance between client and therapist with the medium being the aroma rather than the music. Each person is unique, and aromatherapy offers a wide chemical array from which to design a program of treatment. It is hoped that the reader will be stimulated to further explore this vast and pleasing modality.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

A. TRAINING AND CERTIFICATION

In the United States, aromatherapy has been taught as part of other curricula, such as a botanical medicine course in a naturopathic school. Osteopathic and allopathic medical schools are gradually adding departments of complementary or integrative medicine, but aromatherapy as a distinct course discipline is yet to be offered. Professional training in aromatherapy rests with the medical schools of France, Germany, the United Kingdom, and other countries. There are a number of resident and home study courses taught in North America from which graduates may obtain a certificate or diploma. Standardization of course content and a national certification test are ready to be implemented. Apprenticeship with a practicing aromatherapist is another way one may obtain training. To find a qualified provider in a given region or country, one should contact a local or national aromatherapy society. The National Association for Holistic Aromatherapy maintains a registry of providers, as do some private schools of aromatherapy (see the References and Resources).

B. PRACTICE EXPECTATIONS

Practice styles vary depending on the country of training. Generally, the aromatherapist performs an intake history which might include much detail on the physical, emotional, and spiritual health of the client. A physical examination may be accomplished commensurate with one's training and licensure. After establishing a clinical database, the practitioner will select the essential oils for treatment. Some practitioners sell the oils directly to the client. Others may be able to write a prescription that the client will be able to take to a specialized pharmacy. The client may be instructed to buy the oils from a certain supplier. Some other CAM modality may be recommended or performed as well. Costs

vary considerably but are usually not reimbursable by insurance in the United States. A few medical-grade oils can be very expensive. Most remain affordable but supply and demand ultimately affect availability and cost.

VII. RESOURCES

A. SCHOOLS AND COURSES

Australasian College of Herbal Studies (ACHS) USA
P.O. Box 57
Lake Oswego, OR 97034
(800)487-8839

Offers resident and home study certificate and diploma courses in aromatherapy taught by practicing aromatherapists.

Pacific Institute of Aromatherapy
P.O. Box 6723
San Rafael, CA 94903
(415)479-0119

Course offerings include resident and home study in basic and advanced aromatherapy.

B. NATIONAL ORGANIZATIONS

National Association for Holistic Aromatherapy
2000 2nd Avenue, Suite 206
Seattle, WA 98121
(206)256-0741
web site: www.NAHA.org

Maintains a registry of aromatherapists and conducts workshops and conferences. Has a database of information available for professionals and the public. Publishes *Scentsitivity,* a quarterly journal of aromatherapy.

American Alliance of Aromatherapy
P.O. Box 309
Depoe Bay, OR 97341
(800)809-9850

Maintains a registry of aromatherapists. Publishes a quarterly newsletter that has much practical information.

C. RECOMMENDED JOURNALS

Aromatherapy Today
P.O. Box 21 1
Kellyville NSW 2 155 Australia
61-2 9894 9933

Practical reviews on basic and clinical aspects of aromatherapy.

Aromatherapy Quarterly
P.O. Box 421
Inverness, CA 94937-0421
(415)663-9519

General aromatherapy topics from a holistic perspective.

International Journal of Aromatherapy
P.O. Box 309
Depoe Bay, OR 97341
(800)809-9850
web site: www.healthy.net/aaoa

D. RECOMMENDED TEXTS

Damian, P., & Damian, K. (1995). *Aromatherapy, scent, and psyche.* Rochester, VT: Healing Arts Press. Very thorough review on the physical and emotional aspects of essential oils.

Price, S., & Price, L. (1999). *Aromatherapy for health professionals* (2nd ed.), London: Churchill Livingstone. An in-depth, well-referenced text for the beginner and the advanced student of aromatherapy.

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Chapter 5

Diet and Essential Fatty Acids

Janet E. Settle, MD

I. OVERVIEW

The human brain is 60% fat. Unlike many genetically determined capacities, brain functioning is dependent on the type of fat incorporated into brain cells, which is largely determined by diet. Investigation of the impact of the dietary intake of various fats is exploding in every field in medicine. Unlike the dietary advice of yesteryear, it is no longer accurate to say all dietary fat is bad. There are good and bad dietary fats. The big news is that even a "good" fat is harmful if it is not balanced by appropriate amounts of other good fats.

Handbook of Complementary and Alternative Therapies in Mental Health

Essential fatty acids (EFAs) are fats necessary for survival that cannot be manufactured by the body and must be supplied by food. There are two families of EFA, omega-3 and omega-6. While omega-6 fatty acids have long been accepted as essential nutrients, omega-3s are only recently in the spotlight. Although both are essential, the ratio of omega-6 to omega-3 fatty acids in the diet is critical. A 1: 1 ratio of dietary omega-6 to omega-3 fatty acids is recommended for optimal health. The typical American diet provides a 20: 1 ratio. Americans have a 20-fold excess of omega-6 fatty acids in their diets, and that excess is directly reflected in the composition of the brain.

This omega-6 excesslomega-3 deficiency leads to a cascade of changes affecting every organ system. Omega-3 fatty acid supplementation has been reported to benefit heart disease risk, hypertension, arthritis, inflammation, breast cancer risk, Crohn's disease, emphysema, bronchitis, asthma, chronic fatigue syndrome, ulcerative colitis, psoriasis, cancer mortality, heart disease recurrence, movement disorders, cancer progression, arrhythmias, and premature delivery (Simopoulos, 1999).

Mischoulon (2000) reviewed the evidence that omega-3 deficiency may contribute to the development of psychiatric disorders including depression, bipolar disorder, schizophrenia, dementia, dyslexia, attention deficit hyperactivity disorder (ADHD), and postpartum psychiatric disorders. Medical understanding of the impact of EFA intake is in its infancy. All signs indicate that the results of this burgeoning investigation may lead to dramatic advances in medical science in the twenty-first century.

A. THE IMPORTANCE OF FATTY ACIDS

Every cell in the body is enclosed by a cell membrane, a fluid structure that creates a selective barrier between the inside and outside of the cell. The membrane contains specific receptors and selective channels that manage, interpret, and direct the flow and content of information and molecules between the outside and inside of the cell. The functionality of cell membranes is vital to all aspects of physical and mental health.

The building blocks of cell membranes are long chain fatty acids, chains of 20-22 carbon atoms with no double bonds (saturated), one double bond (monounsaturated), or two or more double bonds (polyunsaturated). Membrane function is dependent on the presence of equal amounts of omega-6 and omega-3 long-chain polyunsaturated fatty acids. Omega-3 and omega-6 fatty acids cannot be interconverted. The dietary ratio of omega-6 to omega-3 fatty acids determines the ratio of omega-6 to omega-3 fatty acids in the brain cell

membranes. That ratio, in turn, governs the brain's ability to function. The human brain contains roughly equal amounts of AA (omega-6) and DHA (omega-3). Maintaining this balance requires dietary intake of equal amounts of omega-6 and omega-3 fatty acids. Long-chain EFAs necessary for neural membrane health can be obtained directly from the diet. Short-chain precursors are also found in the diet but must be elongated before being incorporated into brain cells. Evidence indicates that some people may have defects in the ability to make this conversion.

The most common dietary fat in the U.S. diet is linoleic acid (LA), a short-chain omega-6 fatty acid found in seeds, grains, and their oils such as corn oil, soybean oil, sunflower oil, and safflower oil. The body elongates LA into arachidonic acid (AA), an important long-chain omega-6 fatty acid in the brain.

Omega-3 fatty acids are made primarily by aquatic plants (algae). The short-chain omega-3 precursor, alpha-linolenic acid (ALA), is also found in walnuts, flaxseed, black current seed oil, and canola oil. ALA is converted into eicopentainoic acid (EPA) and then docosahexainoic acid (DHA), both important long-chain omega-3 fatty acids. DHA is concentrated in the brain and is also the most abundant fatty acid in human breast milk. EPA and DHA are found in cold-water fish such as salmon.

Animal studies (Bourre ***et*** al., **1993)** reveal that diet determines membrane fatty acid composition in the brain and that an omega-3 deficient diet results not only in abnormal membranes but also in abnormal behavior, decreased stress tolerance, decreased learning capacity, abnormal visual development, increased vulnerability to toxins (including alcohol), and increased anxiety. Altered membrane fatty acid content may also impact serotonin metabolism known to be important in the pathogenesis of depression.

B. THE DIETARY LESSON OF THE STONE AGE

Human genetic structure evolved over a 4-million-year period during which brain size doubled as a result of the favorable diet available to our ancestors during the Paleolithic period. Modern man descended from hominids who evolved in the East African Rift Valley, a unique ecosystem containing enormous freshwater lakes providing a rich marine diet. Access to improved nutritional resources, especially omega-3 long-chain fatty acids, was accompanied by an increase in relative brain size (Broadhurst ***et*** al., **1998).** This opportunity at the land-water interface supplied the perfect brain-specific nutrition, a dietary ratio of omega-6:omega-3 fatty acids closer to the 1:1 ratio of the human brain than any other food source. This diet enhanced

neural functioning, allowing the evolutionary breakthrough to advanced human capabilities, including tool development, culture, language, and, ultimately, consciousness (Chamberlain, 1996).

After 4 million years of genetic evolution on a diet containing 80% meat and no grains, the human diet changed dramatically with the onset of agriculture some 10,000 years ago. The domestication of plants and animals has led to ever increasing consumption of grains, grain-fed meat, dairy products, and vegetable oils, all high in omega-6 fatty acids and lacking omega-3s. Although diets have shifted profoundly over the past 10,000 years, the genes determining basic human anatomy and physiology have remained relatively unchanged over the past 40,000 years (Cordain, 1998).

The agricultural revolution started to topple the delicate balance of fatty acid consumption and the industrial revolution finished the job by introducing vegetable oils, refined grain products, and grain-fed livestock. Omega-6 consumption in the form of vegetable oil has increased tremendously. Between 1950 and 1994, daily DHA intake decreased by 45% among Americans who eat fish and by 66% in nonfish eaters (Stordy & Nicholls, 2000). The recent emphasis on low-fat diets has increased the dietary ratio of omega-6:omega-3 fatty acids (Kaplan, 1991). Commercially produced livestock raised on omega-6 rich grains have five times less omega-3 content than free-range animals obtaining omega-3s from grasses. Farmed fish may also be fed grain meal instead of marine plants, decreasing omega-3 content.

The Industrial Revolution also brought hydrogenation, a chemical process converting liquid vegetable oil into solid shortening or margarine, called trans fats or partially hydrogenated fatty acids. A quick survey of food labels confirms that partially hydrogenated oils, offering a very long shelf life, are found in nearly every processed food in the supermarket. The average American eats 5-1 5 grams per day of this decidedly artificial substance. With a different configuration than any other type of fat, the body has no means of metabolizing this interloper. Trans-fatty acids may impair the body's production of healthy membrane fatty acids and have been studied in relation to increased heart disease, diabetes, and cancer. Trans fats are thought to be the biggest culprit in producing dangerous changes in serum lipid profiles, such as increased cholesterol, more important even than intake of saturated fats (Mensink & Katan, 1990; Zock & Katan, 1997).

We are not consuming the diet that facilitated our evolutionary leap from the animal kingdom into consciousness. We have replaced omega-3 fatty acids from fish, wild game, and leaves with omega-6 fatty acids from seeds. Like a sputtering gasoline engine running on diesel fuel, the mismatch between the physiologically optimal diet and the culturally accepted dietary norm may prove to have tremendous medical and psychiatric consequences.

II. RELEVANCE TO MENTAL HEALTH

The fatty acid imbalance in the Western diet leads to excess levels of omega-6 and deficient levels of omega-3 fatty acids in human tissues. Smith (1991) and Maes ***et al*** (1995) hypothesized that this imbalance is related not only to increased rates of cardiovascular and inflammatory disorders, but to the skyrocketing rates of major depression. A dramatic positive correlation has been noted between major depression and heart disease (Booth-Kewley & Friedman, 1987). The elevated omega-6:omega-3 ratio is associated with both major depression and the risk of heart disease (Kannel, 1987).

A. EPIDEMIOLOGIC STUDIES

Numerous epidemiologic studies have demonstrated the cardiac health benefits of fish consumption. Mediterranean populations consuming fat derived largely from fish and vegetables suffer a much lower rate of heart disease than Western populations. The Greenland Eskimos, whose marine diet offers a 1:1 omega-6 to omega-3 ratio, have extremely low rates of heart disease and ideal lipid profiles (Bang ***et al***, 1980). ***In*** a 20-year study of Dutch men without heart disease, fish consumption was found to be inversely correlated with death from coronary heart disease with a 50% lower death rate in those consuming more than one ounce of fish daily compared with non-fish eaters (Kromhout ***et al***, 1985).

Several epidemiologic studies strongly suggest that decreased omega-3 consumption is correlated with increased rates of depression (Hibbeln & Salem, 1995). Weissman ***et al*** (1996) used rigorous methods to study the cross-national prevalence of major depression and bipolar disorder and found a 60-fold variation across countries. The pattern parallels the relative risks for cardiac mortality in those countries, supporting the hypothesis that dietary differences may contribute to both findings. Hibbeln (1998) found a striking inverse correlation between the annual prevalence of major depression and the fish consumption in nine countries. Populations in Japan, Taiwan, and Hong Kong, all with high rates of fish consumption, show rates of depression up to ten times lower than in the United States. The lowest rate was found in Japan, which has the highest fish intake of the countries studied.

B. DEPRESSION

Dietary fish intake and omega-3 fatty acid intake are inversely correlated with depression (Peet ***et al.***, 1998). Depressed patients show a significant

depletion of total omega-3 levels, especially DHA, compared with nondepressed controls. Depressive symptoms are correlated with the AA (omega-6): EPA (omega-3) ratio such that increasingly severe symptoms are associated with greater omega-3 depletion (Adams *et al,* 1996; Edwards *et al,* 1998). Successful antidepressant treatment does not impact omega-3 deficiency (Maes *et al,* 1999).

EFA levels are determined not only by dietary intake, but also to the body's capacity to process, incorporate, and retain fatty acids in membranes. Research suggests the existence of abnormalities in the ability to convert short-chain precursors into long-chain fatty acids. Brain cells incorporate only long-chain fatty acids, not their short-chain precursors. In two groups with equal caloric and omega-3 intake (Maes *et al.,* 1999), depressed subjects showed depletion of long-chain omega-3 fatty acids and a compensatory increase in long-chain omega-6 fatty acids compared with controls. Notably, the levels *of both* omega-3 and omega-6 short-chain precursors were found to be normal, suggesting a defect in omega-3 processing in the depressed group. Omega-3 deficiency in depression may also be the result of increased breakdown of omega-3 fatty acids caused by hyperactivity of the hypothalamic-pituitary-adrenal axis and oxidative damage due to psychosocial stress (Hibbeln & Salem, 1995).

Maes *et al.* (1999) reviewed evidence that fatty acid abnormalities are related to the serotonergic dysfunction viewed as central to the pathogenesis of depression. Membrane fatty acids regulate serotonin synthesis, release, and reuptake. Chronic dietary omega-3 deficiency alters the distribution of serotonin receptors in the brain. Correlations between DHA levels and serotonin metabolites offer further evidence that the composition of membrane fatty acids may influence neurotransmitter concentrations (Hibbeln *et al,* 1998).

C. **POSTPARTUM MOOD DISORDERS AND INFANT** DEVELOPMENT

DHA (omega-3) is essential for normal brain development. Neurons do not regenerate, so it is critical that adequate nutrients, especially fatty acids, are available as the fetus builds its lifetime supply of brain cells. The high-priority fatty acid needs of the fetus and nursing infant command all available resources, leaving the mother depleted and at increased risk for psychiatric disorders. Normal women become increasingly deficient in both omega-6 and particularly omega-3 fatty acids during pregnancy due to the significant transfer of fatty acids from the mother to the fetus (Hornstra *et al,* 1995). Given the severe deficiency of omega-3 fatty acids in the prevailing diet, women are unable to meet fetal requirements without sacrificing their own omega-3

stores. Successive pregnancies progressively worsen maternal omega-3 depletion, suggesting that replenishing these stores is difficult (Al *et al,* 2000). Lactating mothers recover more slowly than nonlactating mothers, but neither group approaches normal fatty acid levels by 6 weeks postpartum, with DHA levels at 35% of prepregnancy levels (Holman *et al,* 1991). Maternal omega-3 deficiency may contribute to the increased depression risk in women of childbearing age and in postpartum periods (Hibbeln & Salem, 1995). In a dramatic population study, Hibbeln (1999) found a strong inverse correlation between rates of fish consumption and postpartum depression.

The most abundant fatty acid in breast milk, DHA (omega-3) levels in U.S. breast milk are the lowest in the world. Omega-3 fatty acids, routinely incorporated into infant formula in other countries, are absent in U.S. infant formula. In deceased infants, brain DHA was significantly greater in breast-milk-fed than in formula-fed infants, who had a compensatory increase in omega-6 fatty acids (Farquharson *et al,* 1995). Long-chain fatty acid deficiency at any stage of fetal or infant development can result in irreversible defects in brain development (Broadhurst *et al,* 1998).

D. COGNITIVE DEVELOPMENT AND ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

Experts wonder if early DHA deficiency leads to a lifelong vulnerability to depression, ADHD, and other mental disorders. Increasing omega-3 fatty acid deficiency in the prevailing diet may be responsible for the growing prevalence of ADHD (Stordy & Nicholl, 2000). Two studies of infant omega-3 supplementation show cognitive and developmental advantages (Birch *et al,* 2000; Willats *et al,* 1998). Mothers of dyslexic children reported deficient dietary omega-3 fatty acid intake during pregnancy compared with mothers of nondyslexic peers (Stordy & Nicholl, 2000). Children with ADHD have lower membrane levels of DHA, EPA, and AA than matched controls, despite normal intake of short-chain precursors suggesting processing abnormalities (Burgess *et al,* 2000). Children with low omega-3 fatty acid levels are more likely to have behavioral and learning problems (Stevens *et al,* 1996).

E. SCHIZOPHRENIA

Fenton, Hibbeln, and Knable (2000) reviewed the literature, finding strong scientific support for abnormal fatty acid metabolism in schizophrenia. Compared with controls, subjects with schizophrenia are significantly deficient in EFAs.

Higher omega-3 intake is correlated with lower symptom severity. Despite depleted membrane levels of omega-3, patients with schizophrenia do not have deficient dietary fatty acid intake, suggesting a processing abnormality (Peet ***et al,*** 1998).

F. SUMMARY

Evidence suggests that the psychiatric risks of omega-3 fatty acid deficiency include increased risk of depression, bipolar disorder, schizophrenia, ADHD, postpartum mood disorders, dementia, and alcohol-related mood disorders. The prevailing diet that leads to severe omega-3 deficiency contributes to this risk. Additional research will determine the relative roles played by dietary deficiency and fatty acid processing defects in the pathogenesis of mental disorders.

III. **SAFETY**

Omega-3 fatty acid supplements are classified as "generally regarded as safe" by the Department of Health and Human Services at levels of up to 3 grams of DHA + EPA per day. Studies cited here include doses up to 10 grams fish oil per day without major adverse effects. Higher doses appear to be safe as the Greenland Eskimos have a daily intake of 14 grams. Adverse effects occur primarily at daily doses over 3 grams. They may include fishy breath, belching, mild nausea, gastrointestinal upset, possible increased low-density lipoproteins (LDL) (although other lipid measures are generally improved), increased bleeding time, exacerbation of asthma in aspirin-sensitive patients, and additive effects with anticoagulants such as aspirin and warfarin (Fenton ***et at,*** 1999; Stoll, 2000). Omega-3 fatty acids decrease the tendency of blood to clot, but no clinical studies have shown evidence of increased blood loss. In high doses, omega-3 fatty acids may increase glucose levels in those with noninsulin dependent diabetes (NIDDM). Those on anticoagulant medication, with clotting abnormalities, or NIDDM should review fatty acid supplementation with their physician. Fishy breath and belching, the most common side effects, may be reduced by taking supplements on an empty stomach, 30 minutes before eating, or at bedtime. Fatty acid supplements should be taken with vitamins C (1000 milligrams per day) and E (800 IU per day) to reduce oxidative fatty acids damage.

Omega-3 fatty acid supplementation is being studied as an augmentation strategy for use with conventional treatments in mental health. There are no

studies looking at elimination or reduction of conventional medications using fish oil supplementation. Under no circumstances should this be attempted without the involvement of the prescribing physician.

IV. RESEARCH ON FATTY ACID SUPPLEMENTATION

Despite a persuasive argument for the role of dietary omega-3 fatty acids in depression, there is little published data on supplementation in this population. Compared to placebo, DHA supplementation prevents increased aggression toward others in students under stress (Hamazaki ***et al,*** 1996). Cenacchi ***et al.*** (1993) reported decreased withdrawal and apathy in elderly patients treated with DHA compared with placebo. Maggioni (1990) found improved depressive symptoms in elderly women treated with DHA supplementation.

Supplementation during pregnancy improves infant fatty acid status. Conner ***et al.*** (1996) found that DHA levels in babies whose mothers had received dietary omega-3 supplementation during pregnancy were 40% higher than controls whose mothers received no supplement. There are no published studies of supplementation and rates of postpartum depression.

Stordy (2000) reviewed the published and anticipated studies of fatty acid supplementation in ADHD, dyslexia, and dyspraxia. In a 4-month open study using a mixed omega-3 plus omega-6 supplement, children with dyspraxia, a developmental coordination disorder affecting 5-10% of children, showed significant improvement on all outcome measures. In a double-blind placebo-controlled trial awaiting publication, Burgess ***et al.*** (2000) reported improvement with combination fish oil and omega-6 supplementation in children with ADHD, although not across all measures. Results are also expected from Richardson, who is completing three large double blind placebo-controlled studies of supplementation in dyslexia and learning disorders. Unpublished results show improvement in cognition, behavior, and anxiety in the treatment group compared to controls. One study (Voight, 1999) found no benefit in ADHD supplementation with DHA alone from microalgae.

A 1999 study by Andrew Stoll, MD, a psychiatrist at Harvard Medical School, and his colleagues is the most important to date on fatty acid supplementation in mental health. This 4-month, double blind, placebo-controlled study of 30 patients with bipolar disorder found that patients who received omega-3 fatty acid supplementation (9.6 grams DHA+EPA per day) were improved on nearly every outcome measure. Supplementation was added to the existing medication regimen and was found to significantly reduce the frequency of relapse and increase the length of remission. Stoll asserted that

omega-3 fatty acids may mimic the mechanism of action of mood stabilizers such as lithium and Depakote.

In schizophrenia, three studies have shown that augmentation of conventional treatment with omega-3 supplementation significantly improves symptoms (Fenton *et al.,* 1999). Tardive dyskinesia may also be improved. Preliminary results (Peet ***et*** *al.,* 1998) of a double-blind, three-arm trial comparing EPA enriched oil, DHA enriched oil, and placebo in 45 patients with schizophrenia are positive.

Norden (1995) asserted that EPA (omega-3) supplementation weakly blocks the body's production of AA, the most important long-chain omega-6 fatty acid. For this reason, he has recommended combination supplementation with fish oil and gamma-linoleic acid (GLA), an omega-6 AA precursor found in evening primrose oil and borage oil. Comparing studies using GLA supplementation, fish oil supplementation, and combined supplementation, the combined strategy is most favorable in treating pregnancy-induced hypertension and allergies. Stordy and Nicholl (2000) recommended combination supplements providing DHA, AA, and GLA for ADHD, pointing to one study in which supplementation with DHA alone showed no benefit. Al *et al.* (2000) reported evidence to support combination supplementation in pregnant and lactating women. There are no published studies comparing fish oil supplementation with and without added GLA.

V. TREATMENT WITH FATTY ACID SUPPLEMENTS

A. FOOD SOURCES OF OMEGA-3 FATTY ACIDS

Omega-3 supplementation can take several forms. Increased consumption of fish and other omega-3 containing foods is one option. Omega-3 fatty acids are most abundant in oily, cold-water fish such as salmon, mackerel, herring, and sardines. It is impossible to get the high amounts of omega-3 fatty acids used in these studies by eating fish alone. The safety of increasing wild fish consumption is complicated by the presence of dangerous toxins. Large fish with long life spans accumulate more toxins than smaller fish, and freshwater fish are more likely contaminated than ocean fish. Farmed fish are less likely to contain toxins than wild fish, but also may contain lower levels of omega-3 fatty acids. Other foods containing omega-3 fatty acids include canola oil (a good substitute for vegetable oil), walnuts, soybeans, and flaxseed. New dietary sources of omega-3 fatty acids are being developed. Marine-based chicken feed produces omega-3-enriched eggs. Research is underway to enrich other animal products.

B. FISH OIL SUPPLEMENTATION

Fish oil contains the vital long-chain omega-3 fatty acids, DHA and EPA. Fish oil is commonly available in capsules containing 1000 milligrams of omega-3 fatty acids, including 100-200 milligrams each of DHA and EPA. Product labels suggest doses of one or two capsules daily. Studies cited here use doses of fish oil up to 10 grams per day providing a combined DHA + EPA dose of 1 to 9.6 grams daily. Achieving high doses using commonly available preparations requires taking many capsules per day. Highly concentrated preparations facilitate taking higher doses.

Precise information regarding optimal dosing is unknown pending completion of further studies. An international panel (Simopoulos *et al.,* 1999) recommended that adults obtain a minimum of 220 milligrams each of DHA and EPA daily. Pregnant and lactating women should receive at least 220 milligrams of EPA and 300 milligrams of DHA. Infant formula should be supplemented with 30 milligrams of DHA per day (Farquharson *et al.,* 1993).

Stoll (2001) reported that although EPA is incorporated into membranes in much smaller amounts, it is broken down faster, increasing daily requirements. He asserted that EPA provides the mood-enhancing benefits of fish oil and that this benefit may be lost if DHA exceeds EPA. Therefore, he recommended supplements containing the highest available EPA concentration and EPA:DHA ratio. Commonly available supplements supply ratios up to 2:1 and highly concentrated products contain ratios up to 7: 1. He recommended an EPA + DHA dose of 1-2 grams per day for general health and 2-5 grams per day for mood elevation or mood stabilization.

The time to onset of benefits and the time to maximum benefit are unknown. Long-term studies of omega-3 supplementation show that the fatty acid profile of fat tissue continues to change through the 2-year mark with increasing DHA and EPA levels (Nightingale *et al.,* 1990). The brain cells of animals on diets with restricted omega-3 fatty acids require several months on balanced diets to recover, much longer than cells of other organs (Bourre *et al.,* 1993). Clinical studies cited here are generally months in duration and report the onset of benefit between 6 and 20 weeks. Given the slow turnover of neural membranes, the time to maximum benefit may be longer.

C. FLAXSEED SUPPLEMENTATION

Flaxseeds contain high concentrations of ALA, the short-chain omega-3 precursor to EPA and DHA. Only one study of three patients with schizophrenia supports the benefit of flaxseed supplementation in mental

health. Some people may be unable to convert ALA to DHA and EPA in sufficient quantities to meet membrane needs. Because of incomplete, slow conversion, it may take up to 10 times as much ALA from flaxseed oil to supply the same benefit as EPA + DHA from fish oil. For those seeking mental health benefits, flaxseed supplementation should be considered only for strict vegetarians or if fish oil supplementation is unaffordable or intolerable.

Flaxseed supplementation can be achieved by taking flaxseed oil (7 grams of ALA per tablespoon) or flaxseed oil capsules. There are no mental health studies to offer guidelines on dosing or side effects, but Stoll (2001) suggested 3-5 grams per day of ALA. Caution is advised with doses of more than 20 grams per day, which have reportedly been associated with hypomania and mania. Anyone with bipolar disorder taking flaxseed oil should be closely monitored. Zinc, which is required for ALA metabolism, should be added to any flaxseed regimen at a dose of 15 to 30 milligrams per day. Ground flaxseed meal can be added to foods to increase omega-3 intake. Intake of flaxseeds and flax meal, potentially toxic at high doses, should be limited to 3 tablespoons per day or less.

D. SUMMARY

There is a vast and rapidly expanding body of research on essential fatty acids. Although much of the evidence linking omega-3 fatty acid deficiency with mental illness is indirect, it is nonetheless quite compelling. The evidence points clearly to the potential benefits of dietary omega-3 supplementation for general health as well as mental health. Given the low risk of this intervention, it is hard to justify not augmenting conventional treatment techniques with omega-3 supplementation. Many important studies lie ahead. It will be particularly important to ascertain whether fatty acids processing abnormalities are linked with particular diseases. Substantial research is underway regarding the effects of supplementation in psychiatry and other medical specialties, the results of which will guide us in the future.

VI. DIET AND MENTAL HEALTH

A. OVERVIEW

We are confronted with a whirlwind of conflicting information on the health effects of dietary choices. The prevailing wisdom is that all dietary fat

is bad, leading to high cholesterol, heart disease, and death. The American public has embraced low-fat recommendations, producing an unprecedented national dietary experiment. Compared to the late 1970s, Americans in the late 1980s, eating 4% fewer calories and 11% less fat, had a 31% increase in obesity (Heini & Weinsier, 1997). Carbohydrate intake increased from 45%—52% of caloric intake and sugar intake increased from 120 pounds in 1970 to 150 pounds in 1995 per person per year (Conner & Conner, 1997). The best way to fatten cattle is to feed them excessive amounts of low-fat grain. Apparently, the same is true for humans. Yudkin (1992) cited overwhelming evidence indicating sugar as a greater cause of heart disease than fat or cholesterol. In 30% of men, increased dietary sugar produces all the changes in cholesterol and lipids typically associated with heart disease. Katan (1997) reported that the replacement of dietary fat by carbohydrates has not been shown to reduce the risk of heart disease, cancer, or obesity. Jeppesen *et al.* (1997) found that low-fat, high-carbohydrate diets increase the risk of heart disease in postmenopausal women. Despite eating four times the dairy fat and twice the animal fat, the French have less than half the rate of heart disease found among Americans (Norden, 1995). Increased consumption of simple carbohydrates (pasta) was linked to a higher risk of breast cancer in Italian women compared with consumption of unsaturated fat, which was protective (Franceschi, 1996). Although controversy remains intense, it appears that widely practiced low-fat, high-carbohydrate diets do not improve health. The successor to this organizing paradigm has yet to emerge.

B. RELEVANCE TO MENTAL HEALTH

The striking parallel between the prevalence of mood disorders and the risk of cardiac mortality across 60 countries suggests a common role for diet in the etiology of disorders (Weissman *et al.,* 1996). On autopsy, the cerebral blood vessels of those with a history of major depression have significantly greater atherosclerotic disease than do controls (Thomas *et al.,* 2001). Depression is a risk factor for heart disease independent of dietary and lifestyle risks (Ford *et al.,* 1998). If it is true that depression and heart disease share dietary etiologic factors, guidelines for prevention of heart disease are equally relevant to mental health.

1. The Cholesterol Debate

One of the stated goals of a low-fat diet is to lower blood cholesterol levels. The body manufactures cholesterol, which is essential to health. Dietary

cholesterol intake contributes minimally, if at all, to blood cholesterol levels (Edington *et* al., 1987). Although cholesterol level is associated with cardiac risk in people under 60, the correlation does not persist in older people (Esrey *et* al., 1996). Across age groups, there is no difference in all-cause mortality between those with the highest and lowest cholesterol levels (Klag *et* al., 1993). Gey *et* al. (1991) found that elevated cholesterol levels explained only 17% of the seven-fold variation in death from heart disease across 33 populations, while low vitamin E levels predicted 62% of the variation.

Two studies are representative of the extensive data supporting a correlation between low cholesterol levels and increased risk of depressive symptoms, suicidal ideation, suicidal behavior, and impulsivity in men, women, and adolescents. Steegmans *et* al. (2000) studied 30,000 men and reported a correlation between low cholesterol levels and the risk of both depressive symptoms and suicidal behavior. They found a correlation between low serotonin and low cholesterol, suggesting a relationship between cholesterol and serotonin metabolism (Steegmens *et al.,* 1996). Partonen *et al.'s* (1999) study of 29,133 men found associations between low cholesterol and decreased mood and increased risk of both hospitalization for major depression and death from suicide. Cholesterol-lowering medications may increase risk for accidental and violent death as reviewed by Geurian (1996). In an open trial, four of six high-cholesterol patients placed on cholesterol-lowering drugs developed elevated depression scores, two meeting the criteria for clinical depression (Davidson *et* al., 1996).

2. The Nutrition Controversy

The recommended percentage of daily calories obtained from fat, carbohydrates, and protein is controversial. Carbohydrates (including sugars, grains, vegetables, and fruits) break down into sugars, including glucose, which stimulate insulin. Insulin allows glucose to be removed from the bloodstream, either into cells for use as fuel or converted into fat. Protein is required for production and maintenance of all physical structures, hormones, and neurotransmitters. Protein consumption stimulates the hormone glucagon, which opposes insulin and promotes burning of stored fat. Dietary fats do not affect the secretion of insulin or glucagon.

Different types of carbohydrate stimulate different amounts of insulin as measured by the glycemic index (GI). The GI of a food reflects the impact of eating that food on glucose and insulin levels. Foods that digest quickly, stimulating a rapid rise to high glucose and insulin levels, have a high GI and include sugar, sweets, white flour, potatoes, fruit juice, and refined or processed foods. Low-GI foods, such as whole grains and vegetables, result in

lower blood glucose and insulin levels that increase gradually. For example, in comparing the insulin release stimulated by three equal calorie snacks, the candy bar caused 68% more and the cola and crisps snack caused 75% more insulin release than the raisins and peanuts snack (Oettle, 1987).

There is widespread recommendation that consumption of low-GI carbohydrates, particularly whole grains, fruits, and vegetables, is helpful for mood and anxiety disorders. The manufacture of serotonin in the brain requires tryptophan, an essential amino acid consumed in the diet. A protein-rich meal contains amino acids that compete with tryptophan for processing. When carbohydrates are consumed without protein, there is no competition, and serotonin levels rise. High serotonin levels produce improved mood and better sleep. Whereas a carbohydrate-rich diet may increase serotonin levels, the consumption of simple, high-GI carbohydrates backfires with a roller coaster of unstable blood sugar levels, moodiness, fatigue, foggy thinking, and carbohydrate cravings. Complex, low-GI carbohydrates are recommended in particular for their potential to increase serotonin while maintaining steady blood glucose and insulin levels. Benton and Donohoe (1999) argued against this theory stating that "although such a mechanism may be important under laboratory conditions, it is unlikely to be of significance following the eating of any typical meal. As little as 2-4% of the calories of a meal as protein will prevent an increased availability of tryptophan." They proposed that all tasty foods trigger endorphin release, the probable cause of improved mood. Somer (1999) concurred stating that mood improvement after a sweet snack occurs too quickly for increased serotonin levels to be the intermediary.

In addition to building membranes, essential fatty acids are precursors for eicosanoids-powerful, hormone-like signaling molecules that exist at the cellular level in nearly every organ system. Good eicosanoids reportedly reduce cardiac disease, blood pressure, arthritis pain, and inflammation, and they promote optimal immune function. They reduce depression, enhancing and stabilizing mood by influencing the uptake and release of neurotransmitters. Bad eicosanoids do the opposite. A balance between omega-6 and omega-3 fatty acids is needed to produce optimal levels of good and bad eicosanoids (Stoll, 2001).

Sears (1995) spotlighted the importance of the insulin/glucagon ratio in determining whether EFA precursors produce good or bad eicosanoids. The ratio of protein to carbohydrate consumed along with the type of carbohydrate consumed dictate the ratio of insulin to glucagon released by the body in response to a meal or snack. Sears asserted that production of bad eicosanoids is increased by insulin and inhibited by glucagon. Proponents of this view (Norden, 1995) have argued that although carbohydrate consumption may temporarily increase serotonin levels, this quick fix commands a

steep price in the form of bad eicosanoids that undermine the serotonin system over time.

C. RESEARCH

Research in this area is limited. Many studies look at the impact of a single meal and few examine the impact of diet on mood over time. Lloyd *et al.* (1996) found that dysphoria and fatigue declined and mood improved 3 hours after a low-fatlhigh-carbohydrate meal compared to high-fat/low-carbohydrate or medium-fatlmedium-carbohydrate meals.

Sears (1995) and Norden (1996) reported clinical experience that dietary intervention aimed at increasing production of good eicosanoids produces mental health benefits. They have advocated a ratio of protein to carbohydrates of 0.75 (40% carbohydrates, 30% protein, and 30% fat or "Zone Diet") and substitution of complex, low-GI carbohydrates for simple carbohydrates. Norden offered clinical experience that patients with seasonal affective disorder (SAD) report a reduction in symptoms using this dietary approach. Sears claimed psychiatric benefits for those with depression, SAD, jet lag, hyperactivity, alcoholism, and chronic fatigue syndrome. Other medical benefits may include decreased risk of heart disease, cancer, and autoimmune diseases.

Kalman (1998) studied 29 obese outpatients randomized to one of two 1500-calorie diets along with supervised exercise over *6* weeks. The protein-to-carbohydrate ratios of the two diets were 0.75 (40:30:30) and 0.25, the American Heart Association Step 1 diet (60% carbohydrate, 15% protein, and 25% fat). Along with significantly greater fat and weight loss, the 0.75 group reported significantly less fatigue and a corresponding nonsignificant increase in vigor. In a 2-month controlled study, Wells *et al.* (1998) found that reduction of dietary fat content from 41%-25% produced a significant increase in anger-hostility and no change in tension-anxiety compared with controls. Large controlled studies of the long-term impact of dietary choices on mood and mental disorders are needed.

D. TREATMENT

Pending the results of further research, several steps appear to be indicated in optimizing diet for mental and physical health. All sources concur that complex carbohydrates (whole grains, vegetables) should replace simple carbohydrates (white flour, sugar, refined grains). Extensive research indicates that increased consumption of fruits, vegetables and grains reduces

disease and all-cause mortality (Jacobs *et al,* 2000; Key *et al,* 1996; Liu *et al,* 2000). Sugar and refined grains look increasingly suspicious as disease-generating dietary culprits.

Katan (1997) stated that recommendations to reduce total fat intake are too broad and that reduction should focus on saturated and trans-fatty acids in the prevention of heart disease. This advice applies equally to mental health along with strategies discussed above for balancing omega-3 and omega-6 fatty acid consumption. There are no data to support severe fat restriction for mental health purposes and inconclusive data for the impact of this restriction on health in general. Macronutrient content is the least researched and most controversial dietary decision. Definitive direction awaits further study.

VII. RESOURCES

A. BOOKS

Beyond Prozac by Michael Norden, MD

The LCP Solution: The Remarkable Nutritional Treatment for ADHD, Dyslexia and Dyspraxia by B. Jacqueline Stordy, PhD, and Malcolm Nicholl

The Omega-3 Connection: The Groundbreaking Omega-3 Antidepression Diet and Brain Program by Andrew Stoll, MD

The Omega Diet by Artemis Simopoulos, MD, and Jo Robinson

The Zone by Barry Sears, PhD

B. SUPPLEMENTS

Efalex (Nutricia USA) is the combination fatty acid (DHA, AA, GLA) supplement used in the ADHD studies cited by Stordy. Nutricia USA also makes Efantal, specifically formulated for supplementation during pregnancy. Dr. Stordy provides information on supplement options at www.lcpsolution.com.

Omega-Brite, a highly concentrated fish oil supplement containing the 7: 1 ratio of EPA to DHA recommended by Dr. Stoll, is available at www.omegabrite.com.

Other concentrated fish oil preparations include Pro-omega, available at www.nordicnaturals.com, and Trader Darwin's Hi Potency Omega-3 EPA, available at www.traderjoes.com.

Gold Circle Farms (OmegaTech, Inc.) produces DHA enriched eggs using feed incorporating marine algae. Plans are underway to enrich many other food products.

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Chapter 6

Nutritional Supplements

Janet E. Settle, MD

I. INTRODUCTION

Brain functioning is dependent on the availability of many essential dietary nutrients, including vitamins, essential fatty acids, and amino acids. A medical school faculty member at the University of California, Los Angeles, Melvin Werbach, MD (1991), reported that 31-68% of people with depression have a nutritional deficiency, saying:

> It is clear that nutrition can powerfully influence cognition, emotion, and behavior. It is also clear that the effects of classical nutritional deficiency diseases upon mental function constitute only a small part of a rapidly expanding list of interfaces between nutrition and the mind.

Vitamin deficiencies known to cause psychiatric symptoms include thiamine, riboflavin, niacin, biotin, pantothenic acid, folic acid, and vitamins B6, B 12, and C (Murray & Pizzorno, 1998). In depression, the most common vitamin deficiencies are folate, B6, and B 12. Amino acid deficiencies, also identified in depression, jeopardize synthesis of the brain's chemical messengers called neurotransmitters. This chapter reviews information regarding the role

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of two modified amino acids, SAMe and 5-HTP, in mental health. The brain is an information-processing center that relies on chemical messengers called neurotransmitters for every function.

II. SAMe, FOLATE, AND VITAMIN B12

A. OVERVIEW

SAMe (pronounced sammy), a modified amino acid ubiquitous throughout the body, is manufactured by cells using methionine. It is an essential amino acid found in high-protein foods like meat and fish. The body typically makes enough SAMe, which is vital for normal brain functioning, but the process may be impaired in depression and other conditions (Fava & Rosenbaum, 1994).

Commercially available in Italy since 1977, dozens of published studies examine the treatment of depression with SAMe, perhaps making it the most extensively researched nutritional supplement. SAMe is approved as a prescription medication in Spain, Italy, Russia, and Germany and is currently taken by more than 1 million Europeans for the treatment of depression, fibromyalgia, liver disease, and arthritis. In Italy, it outsells Prozac. Proponents claim that its effectiveness equals or exceeds that of other antidepressants, with a rapid 7-day onset of action and few, if any, side effects (Brown ***et*** al., 1999).

B. RELEVANCE FOR MENTAL HEALTH

SAMe is important in many vital chemical processes. First, it enables the production of glutathione. This critical antioxidant, not available in the diet, defends the body against damage by free radicals, decreases arterial plaque formation, facilitates toxin release by the liver, enhances immune function, and reduces inflammation. SAMe also limits the dangerous accumulation of homocysteine, which is associated with increased arterial plaque formation, blood clotting, and elevated risk of heart disease, stroke, female reproductive cancers, colon cancer, Alzheimer's disease, fibromyalgia, and depression.

Most important, SAMe is central to a process called methylation, thought to play a role in the etiology of psychiatric illness. In methylation, a chemical limb called a methyl group is transferred from one molecule to another. SAMe, the most important methyl donor in the body, donates methyl groups in 35 different reactions to DNA, proteins, lipids, and hormones (Bottiglieri, 1994), impacting cellular function in countless ways, among them neurotransmitter

synthesis and membrane function. Experts (Alacron *et al,* 1985; Bottiglieri *et al.,* 1994; Reynolds *et al,* 1984; Smythies, 1984) hypothesize that depression may be related to diminished methylation capacity. Evidence showing undermethylation in depression and overmethylation in mania supports the case for enzymatic abnormalities.

Vitamin B12 (cyanocobalamin) and folate (folic acid) are also crucial methyl group donors, working side by side with SAMe. Reduced methylation and toxic homocysteine buildup are thought to be the mechanism by which B 12 and folate deficiencies can cause depression, dementia, and other neurologic disorders (Bottiglieri *et al,* 1994; Scott *et al,* 1994). Studies show that supplementation with folate, B 12, and vitamin C increases methylation and potentially stimulates serotonin synthesis (Leeming *et al,* 1982). Folate is highly concentrated in the nervous system and has been shown to increase serotonin levels (Botez *et al,* 1982; Reynolds & Stramentinoli, 1983). Folate deficiency, which correlates with severity of affective illness, is found in up to 35% of depressed patients and a whopping 90% of elderly patients with psychiatric disorders (Carney *et al,* 1987). Depressed patients with folate deficiency are less likely to respond to Prozac than those without folate deficiency (Fava *et al,* 1997). Adding folate to antidepressant treatment, regardless of folate status, is found to improve treatment outcome (Bottiglieri *et al,* 1984).

Deficiencies of B 12 or folate are correlated with decreased SAMe levels in the cerebrospinal fluid (CSF) surrounding the brain. CSF SAMe levels are reduced in people with depression, Alzheimer's, Parkinson's, and HIV neuropathies. Depressed patients have low levels of folate, SAMe, and CSF neurotransmitter markers, along with increased levels of dangerous homocysteine (Bottiglieri *et al,* 1994,2000).

In animals and humans, SAMe supplementation increases CSF SAMe and neurotransmitter levels (Bottiglieri *et al,* 1984; Carney *et al,* 1987). Supplementation studies also find increased protein methylation, increased number of receptors, improved neurotransmitter binding to receptors, increased serotonin and dopamine activity, and enhanced membrane fluidity, along with significant clinical improvement (Baldessarini, 1987; Bottiglieri *et al,* 1984; Brown *et al,* 1999; Cimino, 1984; Reynolds & Stramentinoli, 1983).

C. SAFETY

SAMe is a nontoxic, natural substance. No deaths have been reported even at doses up to 5000 milligrams per day. Studies consistently report few, if any, side effects supporting the claim that SAMe is well tolerated. Side effects are

typically mild and transient and may include headache, loose stools or constipation, nausea, vomiting, anxiety, agitation, insomnia, jitteriness, dry mouth, reduced appetite, heart palpitations, sweating, and dizziness. Medical monitoring is indicated for patients with cardiac arrhythmias because of the risk of increased palpitations and for brittle type 1 diabetics because of lack of sufficient research in this population. Those with panic attacks may be less tolerant of SAMe's stimulating side effects. In all these situations, a lower starting dose (100 milligrams) and more gradual dose increases are indicated. There are no known medication interactions, but, pending further study, SAMe should not be used with MAO inhibitors such as Parnate and Nardil. Brown *et al.* (1999) reported having used SAMe safely in combination with nearly every other antidepressant, including St. John's Wort. SAMe can cause hypomania or mania in bipolar patients, necessitating careful monitoring in this group. As in conventional treatment, SAMe may be safe for bipolar patients in limited circumstances when used in combination with a mood stabilizer. Although SAMe has been used in pregnancy without apparent negative effects, there are no studies establishing its safety in pregnant and nursing women.

D. RESEARCH/EXPERIENCE

Although there is robust literature demonstrating the rapid efficacy of SAMe treatment in depression, many studies have a small sample size. A meta-analysis (Bressa, 1994) of all studies published between 1973 and 1992 concludes that in the treatment of depression, the efficacy of SAMe is far superior to placebo (six double-blind studies, n = 198 patients) and comparable to tricyclic antidepressants (TCAs) (seven double-blind studies, n = 201 patients). SAMe is found to outperform placebo by an even greater margin than standard antidepressant medications. Murray and Pizzorno (1998) concurred, summarizing 16 double-blind studies showing that SAMe is dramatically more effective than placebo and significantly more effective than TCAs in treatment of depression. The rapid response reported is quite dramatic. In an open study (n = 163), 55% of patients had greater than 50% symptom improvement at 7 days (Fava *et al.,* 1995). Effectiveness has been documented in postpartum depression (Brown *et al.,* 1999), postmenopausal depression (Salmaggi *et al.,* 1993), and some cases of treatment resistant depression (Bottiglieri, 1997; Rosenbaum *et al.,* 1990). The risk of mania in bipolar depression appears comparable to conventional antidepressants. In one study, 9 of 11 bipolar patients switched from depression to hypomania or mania (Carney *et al.,* 1989). The longest studies of SAMe and depression lasted 42 days and most were shorter than 30 days, leaving

an information void regarding the course of treatment over time. Clinicians experienced in SAMe use report ongoing efficacy without complication, but controlled trials have yet to be published.

The oral preparation of SAMe is newer than the IV form used in many early studies, raising questions regarding the effectiveness of oral SAMe. Although not tested head-to-head, all published studies using oral SAMe show high levels of effectiveness, tolerability, and safety comparable to those achieved using IV SAMe (Bell *et al,* 1994; De Vanna & Rigamonti, 1992; Kagan *et al,* 1990; Salmaggie?*al,* 1993).

In a 4-week, double-blind study at UC Irvine, 62% of depressed patients on oral SAMe were significantly improved compared with 50% of those on desipramine (Bell *et al,* 1994). SAMe levels were significantly elevated in responders from *both* groups, indicating that desipramine may also work by increasing SAMe levels. This supports the hypothesis that adequate levels of SAMe may be needed to achieve a treatment response using *any* antidepressant (Fava & Rosenbaum, 1994).

While there are no studies comparing SAMe to selective serotonin reuptake inhibitors (SSRIs) or other newer antidepressants, these antidepressants are generally thought to be superior to TCAs only in tolerability, not effectiveness. Nonetheless, large-scale controlled studies comparing SAMe to the antidepressants used most commonly in the United States will bolster the acceptance and use of this promising supplement.

E. TREATMENT

1. SAMe Supplementation

Enteric-coated preparations, which are the most stable and best absorbed, should be taken on an empty stomach 30 minutes before meals (Brown *et al,* 1999). In rare cases of heartburn, it may be taken with meals. Starting at 200 milligrams twice a day (or lower, see Section II.E) the dose should be increased gradually with the schedule tailored to fit an individual's experience. The standard dose used in depression studies is 1600 milligrams per day, called the apparent *minimum* oral dose requirement by Rosenbaum *et al.* (1990) and Bressa *et al.* (1994). The maximum dose studied is 3600 milligrams per day. Brown *et al.* (1999) reported that doses as low as 400 milligrams per day may be sufficient for mild to moderate depression. Studies have not been done comparing the efficacy of varying doses. Brown *et al.* (1999) recommended starting with 200 milligrams twice daily for 2 weeks, assessing for improvement and increasing to 400 milligrams twice daily only if needed. Murray (1998) recommended starting with 200 milligrams twice daily for 2 days and increasing to

400 milligrams twice daily on day 3, 400 milligrams three times daily on day 10, and 400 milligrams four times daily on day 20.

Much research remains to be done. In the interim, the persuasive nature of the existing data combined with the apparently benign risk profile suggests the cautious use of SAMe in the treatment of depression. In the absence of SAMe-specific data, we are left with the guidance of existing pharmacologic treatment principles. In conventional antidepressant treatment, improved long-term prognosis is associated with achieving a full remission of symptoms, not just a symptom reduction. This philosophy supports pushing antidepressant doses up, within safe levels, until no further benefit is obtained or until dose increases are limited by side effects. The timing of antidepressant discontinuation is a tricky issue. With prescription antidepressants, longer treatment duration is associated with decreased risk of recurrence. Generally a minimum of 6-12 months' duration is recommended for a first episode. Indefinite maintenance treatment is indicated for those with a history of three or more episodes.

2. Vitamin Supplementation

A high-potency multivitamin with minerals is important for health on every level. Research supports the universal benefits of nutritional supplements. Depleted soil produces food that is less endowed with critical nutrients, making it difficult to meet nutritional needs through diet alone. Processing depletes our food even further. Increasing stress levels raise our nutrient requirements as adrenaline and related compounds increase the production of free radicals. Free radicals damage DNA and other parts of our cells, leading to aging and degenerative diseases including cancer, heart disease, decreased immune functioning, and decreased brain functioning. Nutritional supplements are critical to fighting the effects of free radicals in the body.

The following daily supplements are especially important in maintaining optimal brain functioning and fighting psychiatric disorders: folate 800 micrograms, vitamin B 12 (800-1000 micrograms), vitamin B6 (50-100 milligrams), vitamin E (200-400 IU), and vitamin C (1000 milligrams). For general health, a daily supplement should also include beta-carotene (25,000 IU), calcium (300—1500 milligrams), magnesium (400 milligrams), zinc (15-30 milligrams), manganese (15 milligrams), copper (2 milligrams), chromium (200 micrograms), selenium (200 milligrams), vitamin D (200-400 IU), and 25-100 milligrams each of vitamins B 1 and B2. Iron is recommended only for menstruating women and those with anemia. In others, it may increase the risk of heart disease. All vitamin supplements should be divided into two daily doses because these compounds are rapidly eliminated from the system.

III. 5-HYDROXYTRYPTOPHAN OR 5-HTP

A. OVERVIEW

The brain is an information processing center that relies upon chemical messengers called neurotransmitters for every function. Brain cells require a steady supply of amino acids, the raw materials needed to manufacture neurotransmitters. Essential amino acids are used to produce serotonin, epinephrine, dopamine, and gamma-amino-butyric acid (GABA), the monoamine neurotransmitters. The monoamine theory of depression has been the foundation of our theoretical understanding of the etiology of depression for decades. Protein in the diet is digested into amino acids, the building blocks for muscles, tendons, skin, hormones, antibodies, and many other important elements. All 20 different amino acids are required for health. The body can manufacture 12, but 8 are known as essential amino acids because they must be obtained in the diet. Amino acid supplementation for the treatment of depression is based on the theory that increasing the supply of raw materials, essential amino acids, will increase neurotransmitter levels, improving brain function.

5-HTP is a modified version of the essential amino acid, tryptophan. Tryptophan obtained in the diet is converted into 5-HTP, which is converted into serotonin, the crucial neurotransmitter for mood and psychological health. Dietary tryptophan sources include dairy, eggs, poultry, red meat, soybeans, tofu, and nuts. 5-HTP is not found in food sources, but is a naturally occurring substance in the body. Used in Europe for decades, it has been shown in some studies to be effective in treating depression, fibromyalgia, binge eating, chronic headaches, obesity, and insomnia (Birdsall, 1998). Its ability to increase serotonin levels in the brain has been confirmed by a number of studies.

L-tryptophan was itself available as a nutritional supplement until 1989 and was widely used for treatment of insomnia, depression, and overeating. In 1989, L-tryptophan was taken off the U.S. market after a number of deaths were linked to its use. An extensive investigation into this disaster concluded that the culprit was a contaminant present due to improper manufacturing by a certain Japanese company (Filippini ***et al.,*** 1996). L-tryptophan is again recently available in the United States by prescription only.

B. RELEVANCE

The brain needs serotonin, its master mood molecule. Altered serotonin processing is widely accepted as being important in the pathogenesis o f depression. Depression is a heterogeneous disorder with classic depressive

symptoms springing from different origins. It has been found repeatedly that serotonin activity is diminished in a subgroup of depressed patients. Using a procedure for measuring CNS serotonin production, van Praag and de Hann (1979) identified a subgroup of depressed patients found to manufacture less serotonin than controls. In this subgroup, serotonin deficiency persisted even after symptoms were resolved and medication discontinued. These subjects and their family members have a higher frequency of depressive episodes than depressed subjects with normal levels of serotonin production. Van Praag and de Hann proposed that genetically determined serotonin deficiency predisposes subjects to affective disorder and suggested that increasing serotonin production through supplementation is a rational approach for prevention and treatment in this subgroup (Poldinger *et al.,* 1991; van Praag, 1979).

Increasing serotonin production involves raising levels of either tryptophan or 5-HTP or both inside the brain cell. Compared with other organs, the brain has extra fortification protecting it from the bloodstream called the blood-brain barrier. Hormones, amino acids, and other substances that cross easily from the bloodstream into other organs or muscles may not be able to get into brain cells at all. Some substances may only be able to get into brain cells with the help of specialized transport systems. This extra security protects the sensitive brain from toxins in the blood and from wide fluctuations in brain chemistry. The downside is increased difficulty in accessing a steady supply of raw materials needed for optimal functioning. Serotonin in the bloodstream cannot cross the blood-brain barrier under any circumstances so the brain cells must manufacture their own serotonin. This means brain cells need an ongoing supply of either tryptophan, which is converted into 5-HTP and then serotonin, or 5-HTP itself.

Evidence has supported the investigation of tryptophan as a serotonin booster. Tryptophan blood levels are lower in subjects with major depression compared with controls (Maes *et* ***al.,*** 1990). Klaassen *et al.* (1999) found that the mood-lowering effects of tryptophan depletion are significantly greater in subjects with a family history of major affective disorder compared with controls, suggesting a genetically determined abnormality in the serotonin system. Tryptophan supplementation has been investigated in at least 40 studies on sleep and 30 studies on depression. Mixed results suggest that tryptophan may be effective in mild depression but is not as effective as conventional antidepressants in severe depression. Similarly, it may be effective in treating mild insomnia but is generally not found to be effective in severe insomnia (Young **&** Teff, 1989).

These inconsistent results may reflect the many obstacles blocking the ability of tryptophan to get into brain cells and become serotonin. Absorption of tryptophan is low because it does not compete well with other amino acids

for uptake at the gut wall. Tryptophan in the bloodstream also has to compete for transport into brain cells. In addition, factors such as stress, B vitamin deficiency, magnesium deficiency, insulin resistance, and genetic defect divert tryptophan away from increasing brain serotonin, encouraging it down other chemical pathways.

5-HTP is not plagued with these obstacles and appears to be a more direct method of increasing serotonin levels in the brain. 5-HTP is absorbed easily from the gut into the bloodstream and across the blood-brain barrier into the brain cell. However, one study showed that transport of 5-HTP across the blood-brain barrier is impaired in depressed subjects compared with controls, potentially increasing brain dependence on tryptophan inside neurons as the main serotonin precursor (Agren ***et*** al., 1991). In animal and human studies, 5-HTP supplementation is associated with increased serotonin synthesis in the brain (Miyakoshi, 1974; Takahashi, 1975).

C. SAFETY

5-HTP is found to be well tolerated with side effects rated as mild or very mild. These most commonly include nausea, heartburn, and gastrointestinal upset, and, less commonly, headache, drowsiness, insomnia, palpitations, dry mouth, dizziness, and constipation. Nausea, which is dose dependent, decreases in severity after one to several weeks and can be minimized by starting with a low dose and increasing slowly. Study doses up to 15 times the generally recommended maximum (9000 mg daily) for up to **3** years have been found to be well tolerated.

Despite a lack of reported cases, it is important to be aware of the risk of serotonin syndrome if 5-HTP is combined with other serotonin-enhancing medications, including all selective serotonin reuptake inhibitors. Potentially but rarely fatal, serotonin syndrome is characterized by confusion, shivering, sweating, fever, muscle spasms, diarrhea, agitation, and increased heart rate. If suspected, all serotonergic medications, including 5-HTP, should be discontinued immediately and emergency medical assistance obtained. Serotonin syndrome has been reported with high-dose L-tryptophan (1200 milligrams per day). It was not found in a 1-year study of 5-HTP plus a monoamine oxidase (MAO) inhibitor (Alino ***et*** al., 1976; Mendlewicz, 1980) or in a study of 5-HTP combined with a tricyclic antidepressant (TCA) (Nardini ***et al,*** 1983). Studies combining 5-HTP with selective serotonin reputable inhibitors (SSRIs) have not been reported. Consultation with a physician is essential if 5-HTP is being considered for use in combination with another antidepressant. There are no known contraindications to use with other medications. Safety has not been

established in pregnant or lactating women. There is a risk of conversion to hypomania or mania in those with bipolar disorder. Careful screening and monitoring are warranted in this population.

Eosinophilia myalgia syndrome (EMS) is the potentially fatal condition that caused L-tryptophan to be pulled from the market. The risk of this syndrome with 5-HTP is thought to be low. The tryptophan contaminant responsible for EMS has been linked to a particular production method used by one producer. The production of 5-HTP uses an entirely different process. However, two nonfatal cases of EMS have been reported with 5-HTP. Only one of these occurred after the responsible tryptophan contaminant was identified. In this one case, the contaminant in question was reportedly identified in 5-HTP (Klarskov *et al,* 1999). Care should be taken in obtaining satisfactory quality control information regarding this risk from the manufacturer of 5-HTP supplements.

D. RESEARCH

Byerly *et al.* (1987) reviewed the literature on 5-HTP in depression, including six open and seven controlled studies. In six open studies (n = 252), 29 to 69% of subjects with depression responded favorably to 5-HTP supplementation (Fujiwara & Otsuki, 1973; Kaneko *et al,* 1979; Matussek *et al,* 1974; Nakajima *et al,* 1978; Sano, 1972; Takahashi *et al,* 1975). The results are compromised by small sample sizes and diagnostically heterogeneous populations. Subjects studied included those with psychotic depression, bipolar depression, "neurotic" depression, "reactive" depression, and treatment-resistant depression in which hospitalized patients were being considered for electroconvulsive therapy (ECT). Another open study by Van Hiele (1980) looked at 99 patients with treatment-resistant depression and an average illness duration of 9 years. Using 5-HTP supplementation (50-600 milligrams per day) over several months, 43 experienced complete recovery and 8 significantly improved. In contrast, in two open, controlled, crossover studies, Nolen found no benefit to 5-HTP compared with MAOI in treatment-resistant patients who had failed TCAs (1988) or SSRIs (1985).

Results of controlled studies point inconclusively toward some antidepressant effect of 5-HTP. In a double-blind study, Angst *et al.* (1977) found no difference in efficacy between 5-HTP and TCA, although short study duration may not have allowed for the full TCA benefit to be measured. Van Praag (198 1) reported on a double-blind study by Bartlet in which 19 of 25 subjects improved on 5-HTP, but the number improved on placebo was not reported. 5-HTP was significantly more effective than L-tryptophan or placebo in a 30-day, double-blind controlled trial (van Praag, 1984b). In a double-blind study comparing 5-HTP, with TCA in

anxiety disorders, 5-HTP showed a moderate reduction in anxiety symptoms and no reduction in depressive symptoms, while TCA resulted in significant improvement on all measures (Kahn *et al.,* 1987).

Several studies address the benefits of adding 5-HTP to conventional treatments for depression. Double-blind studies show the superiority of 5-HTP compared with placebo when added to MAOI (Alino *et al.,* 1976) or TCA (Nardini *et al.,* 1983) in hospitalized patients. Mendlewicz and Youdim (1980) found that although 5-HTP plus MAOI was significantly better than placebo, the benefit of 5-HTP alone compared to placebo did not achieve statistical significance, possibly due to small sample size.

Perhaps the strongest data come from Poldinger *et al.* (1991), who found that 5-HTP (300 milligrams per day) and Luvox (150 milligrams per day) were equally effective in a 6-week, double-blind study of 69 outpatients with depression, excluding mania and psychosis. Although Luvox, a standard SSRI, is only approved for the treatment of obsessive compulsive disorder (OCD) in the United States, it is widely used for depression in Europe. It is thought to be comparable in antidepressant efficacy to SSRIs commonly used in the United States, including Prozac, Paxil, and Zoloft.

Van Praag (1980) presented evidence that 5-HTP may be efficacious in the prevention of depressive episodes. In a 2-year double-blind, placebo-controlled, crossover study of 20 patients with recurrent unipolar and bipolar depression, half took 5-HTP (200 milligram per day) for 1 year followed by placebo the second year while the other half started with placebo and then took 5-HTP. Combining both groups, there were 7 relapses on 5-HTP and 24 relapses on placebo. Thirteen of the 20 patients were identified as low-serotonin producers and only 1 of those 13 relapsed on 5-HTP. This suggests that 5-HTP may have a therapeutic role in depression prophylaxis, especially in a subgroup of patients with impaired serotonin production.

Van Praag and Lemus (1986) reported that in about 20% of 5-HTP responders, results started to wear off after about a month. This phenomenon makes the short time frames used in many studies reported earlier even more concerning. Testing in these cases showed that while serotonin levels had risen, dopamine and norepinephrine levels had fallen. These vital neurotransmitters are manufactured from the essential amino acid phenylalanine, which is converted into tyrosine on its way to becoming dopamine and norepinephrine. Tyrosine supplementation restored the antidepressant effect of 5-HTP in this subgroup.

Phenylalanine and tyrosine supplementation have each been studied for their individual antidepressant effects. Gibson and Gelenberg (1983) reviewed the literature on tyrosine reporting that nine patients in ongoing treatment on 6 grams per day of tyrosine showed a 60-70% response rate. Beckman (1983) reviewed six studies of phenylalanine (D- or DL-form) supplementation, finding

that 60-90% of depressed patients responded in open studies, including 17 of 23 treatment-resistant patients. Two studies found phenylalanine supplementation to be equivalent or superior to TCA.

5-HTP absorbed from the gut is readily converted to serotonin in the bloodstream. Because serotonin cannot cross the blood-brain barrier, this so-called peripheral conversion prevents 5-HTP from achieving its mission of entering the brain cell and become serotonin. To minimize peripheral conversion, some recommend that a peripheral decarboxylase inhibitor (PDI), such as carbidopa, be taken with 5-HTP. It is theorized that administration of 5-HTP with a PDI might allow equal efficacy with lower doses of 5-HTP, reducing the incidence of problematic gastrointestinal side effects. Absorption of 5-HTP was found to be enhanced by pretreatment with carbidopa (Westenberg *et al.,* 1982). In a single-dose study, pretreatment with carbidopa was found to dramatically increase blood levels of 5-HTP compared with 5-HTP alone (Magnussen *et al.,* 1981). Results are mixed in similar studies of ongoing treatment.

Opponents to this view claim that PDI administration is unnecessary, citing evidence of antidepressant efficacy of 5-HTP alone (Birdsall, 1998; Murray, 1998). Studies reported earlier include both those that did and did not use accompanying PDI. Studies are inconclusive on this point. An open study (Zmilacher *et al.,* 1988) of *25* patients comparing 5-HTP with and without a PDI found no difference in antidepressant efficacy. Both treatments were considered to be equivalent to standard antidepressants.

Some (Birdsall, 1998; Murray, 1998) summarized the research by saying that 5-HTP is just as effective as conventional antidepressants without negative side effects. Others (Byerly *et al.,* 1987) concluded that while there is evidence to support some antidepressant activity, larger, controlled studies with homogeneous populations are indicated before solid conclusions can be drawn. Poldinger *et al.* (1991), advocating for the addition of 5-HTP to the roster of effective antidepressants, pointed out that even TCAs failed to demonstrate a benefit compared with placebo in a number of double-blind studies reviewed in 1974. In this review, amitriptyline failed in 20 of 50 studies and imipramine in 6 of 20.

E. **TREATMENT**

Due to the incidence of nausea as a side effect, treatment should begin at 50 milligrams three times daily or less as tolerated. Results may begin as early as 3 days and should be expected in less than 2 weeks, although one study found

that some benefited as late as 2 months into treatment. If symptoms remain at 2 weeks, the dose may be increased to 100 milligrams three times daily or as tolerated up to a maximum of 150 milligrams four times daily. With a half-life of only 2-5 hours, 5-HTP should be taken in divided doses, 20 minutes before meals on an empty stomach. Enteric-coated preparations are thought to reduce nausea. In treating depression, if the maximum tolerable dose is not effective, Murray (1998) has recommended adding St. John's Wort (especially for those under the age of 50) or adding Ginkgo biloba (especially for those over 50). If benefits wear off, 5-HTP may be augmented with L-tyrosine 500 milligrams three times daily or DL-phenylalanine 100 milligrams three times daily taken with a protein meal. The standard dose of 5-HTP for insomnia is 100-300 milligrams taken 30-45 minutes before bedtime. In severe cases, doses up to 600 milligrams may be used, although this increases the risk of disturbing dreams and nightmares.

IV. TRIAGE

There are no specific certification programs for the use of nutritional supplements in mental health. The American Holistic Medical Association, www.holisticmedicine.org, can direct you to holistic physicians, including psychiatrists, in your area. Naturopathic physicians (NDs) who are graduates of accredited schools have extensive experience using clinical nutrition in the treatment of disease. The American Association of Naturopathic Physicians (206-323-7610) can assist you in locating a qualified provider.

V. RESOURCES

Beyond Prozac by Michael J. Norden, MD, 1995, New York: Harper Collins.

Encyclopedia of Natural Medicine by Michael Murray, ND, and Joseph Pizzorno, ND, 1998, Rocklin, CA: Prima Publishing.

5-HTP: The Natural Way to Overcome Depression, *Obesity,* ***and Insomnia*** by Michael Murry, ND, 1998, New York: Bantam Books.

Optimal *Wellness* by Ralph Golan, MD, 1995, New York: Ballantine Books.

The Self-Care Guide to Holistic Medicine by Robert Ivker, DO, Robert Anderson, MD, and Larry Trivieri, Jr., 1999, New York: Penguin Putnam.

Seven Weeks to Sobriety: The Proven Program to Fight Alcoholism Through Nutrition by Joan Matthews Larson, PhD, 1997, New York: Ballantine Wellspring.

Stop Depression Now: SAM-e by Richard Brown, MD, Teodoro Bottiglieri, PhD, and Carol Colman, 1999, New York: Berkeley Books.

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Chapter 7

Biofeedback

Donald Moss, PhD

Handbook of Complementary and Alternative Therapies in Mental Health

I. MODALITY OVERVIEW: DESCRIPTION, PHILOSOPHY, HISTORY, AND CURRENT TRENDS

A. OVERVIEW

Biofeedback brings together the values of the complementary and alternative medicine movement with the sophisticated biotechnology of modem medicine. The concept of ***biofeedback*** is simple and appealing. A biofeedback practitioner measures a biological process such as muscle tension by means of an external sensor and provides an immediate visual or auditory display of this signal to the subject. The ***feedback*** of the biological signal enhances the individual's awareness of his or her own body and enables the individual to establish control over the physiological system (see Figure 1). The individual observes the biofeedback display, becomes more aware of the bodily process, and learns to control the bodily process. In each case, human beings are empowered when they are able to bring disturbed bodily symptoms or mind-body processes under their own control. This experience becomes a prelude to increased control over emotions, work activity, relationships, and other areas of life. Thus, the modality of biofeedback naturally supports a philosophy of self-regulation and the acquisition of voluntary controls over one's own body and life.

The effectiveness of biofeedback in teaching awareness and control has been shown with several physiological processes: muscle tension, skin temperature, respiration, autonomic nervous tension, heart rate, electrical wave activity in the brain, and brain blood flow. Biofeedback has well documented applications in health care, mental health, rehabilitation, educa-

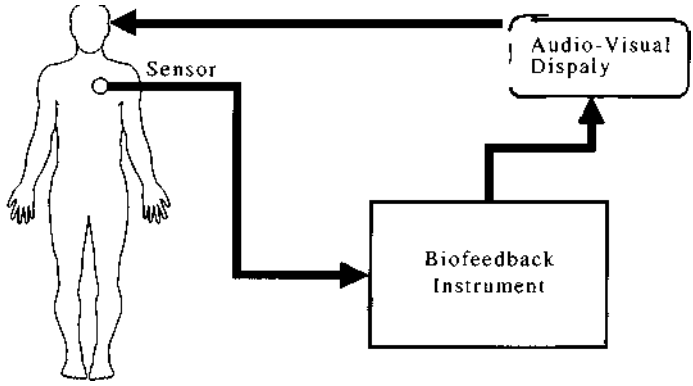

Figure 1 Basic biofeedback system.

tion, sports psychology, and the performing arts. Within the mental health practice, there are a variety of well-documented applications: anxiety (Moss, in press; 2002) depression (Rosenfeld, in press), attention deficit disorders (Lubar & Lubar, 1999), alcoholism and addictions (Peniston & Kulkosky, 1990; Walters, 1998), and general psychotherapy (Moss & Lehrer, 1998; Wickramasekera, 1988).

Biofeedback instrumentation can be simple or sophisticated. An inexpensive plastic thermometer mounted on a cardboard backing can show the individual his or her peripheral hand temperature and assist the individual in increasing or decreasing hand temperature. In a typical computerized biofeedback system, as many as eight separate sensors transmit physiological information to a computer via fiber-optic cable. Sophisticated software processes the signal instantly, records information to the computer hard drive, and produces an immediate display on the computer screen, showing a variety of physiological changes. Table I shows a variety of instruments, what each measures, and its common applications.

B. ORIGINS OF BIOFEEDBACK

Biofeedback emerged in the late 1960s at the convergence point among several scientific, philosophical, and social movements. Physiological research, learning theory, behavior therapy, cybernetics, humanistic psychology, and the counterculture all contributed substantially to the birth of biofeedback (Gaarder, 1979; Moss, 1994).

Early researchers and practitioners made many contributions to the foundations of biofeedback (Moss, 1998, pp. 146-153). For instance, Edmund Jacobson, a Harvard physician and physiologist, developed *progressive muscle relaxation.* During the 1920s and 1930s, he refined this technique as a treatment for neurotic tensions and functional medical disorders (Jacobson, 1938). Johann Schultz, a German physiologist, developed *autogenic training* in the 1930s, a technique for creating a state of low physiological arousal, producing deep feelings of relaxation in the subject (Schultz & Luthe, 1959). Early behavioral researchers, including B. F. Skinner, Joseph Wolpe, and Albert Bandura, extended the lessons of experimental research on animals to create the new disciplines of operant conditioning and behavior therapy (Skinner, 1969; Wolpe & Lazarus, 1966).

Three researchers played major roles in the emergence of biofeedback as a research-based approach: Joe Kamiya, Neal Miller, and John Basmajian. In the late 1950s, Joe Kamiya investigated the phenomenon of internal private perception: What can the individual observe happening within him or herself?

Table I
Basic Biofeedback Modalities

Modality	Abbreviation	Biological process measured	Common applications
Electromyograph	EMG	Electrical activity of muscles	General relaxation training, headache, chronic back pain, stroke and neuromuscular rehabilitation
Electrodermal response Also referred to as: Skin conductance level Galvanic skin response	EDR SCL GSR	Electrical conductivity in palmar surface of fingers, EDR reflects sweat gland activity and mental activation	Cognitive relaxation, monitoring anxiety and cognitive activation in psychotherapy
Thermal biofeedback	TEMP	Provides index of peripheral blood flow and vascular dilation or constriction	General relaxation training, migraine headache
Respiration strain gauge	RESP	Monitors the activity and rate of breathing	General relaxation, anxiety, asthma, chronic pain, irritable bowel syndrome, psychotherapy
Capnometer	CAP	Measures CO_2 in expiration, detects hyperventilation	Anxiety disorders, asthma, respiratory illness
Heart rate Electrocardiogram Photoplethysmograph	HR EKG PPG	Monitors frequency and variability of electrical activity of heart. The EKG is more precise than PPG	Anxiety, cardiac rhythm disorders, IBS, pain disorders
Electroencephalograph	EEG	Measures the electrical activity of cortical surface of brain, shows activation of brain regions	Index of state of consciousness; attention deficit hyperactivity disorder, learning disability, alcoholism and addictions, neuropathy and psychotherapy
Hernoencephalograph	HEG	Measures hemodynamics, cerebral blood flow, volume, oxygenation, and temperature; shows activation of brain regions	State of consciousness and arousal. ADHD, LD, alcoholism, addictions, migraine, psychotherapy

He discovered that one of his subjects could learn through electroencephalogram (EEG) feedback to discriminate between alpha- and beta-dominant brain states. Then Kamiya discovered that with feedback this same subject could produce either brain state on demand (Kamiya, 1969). Kamiya's research inspired the dream that human beings could cultivate spiritually awakened states of consciousness through biofeedback.

In the 1950s and 1960s, John Basmajian began a program of research to test the limits of voluntary control over the skeletal muscles. With feedback, almost any subject could gain control over a single motor unit within a muscle (Basmajian, 1967). In the 1960s, Neal Miller and his colleagues carried out a program of research showing that animals could be conditioned operantly to control internal body systems such as blood pressure, cardiac function, and intestinal activity (Miller, 1969).

Cybernetics and general systems theory provided the concepts of feedback, feed-forward, and self-regulation. Cybernetics is the science of information theory, which flourished with the advent of modem computers. This science teaches, "one cannot control a variable unless information about the variable is available to the controller" (Schwartz *et al,* 1995, p. 11). In addition, during the 1960s, systems analyses of biological systems revealed that organisms are complex, self-regulating systems that maintain complex balances within the organism and the surrounding environment by means of intricate feedback and feed-forward loops. Both the operant conditioning model and the biological feedback concept played important roles in the early development of biofeedback.

Both humanistic psychology and the countercultures of the 1960s provided inspiration for the emergence of biofeedback as well. For example, Abraham Maslow inspired the pursuit of the higher potential of human beings (Moss, 1998). The Association for Humanistic Psychology cosponsored a meeting on altered states of consciousness (Council Grove, 1969). Maslow's work and the Council Grove meeting served as stepping-stones toward the emergence of biofeedback. The counterculture of the late 1960s was a social movement against traditional lifestyles and in favor of self-determination, personal choices, and innovative ways of thinking. Biofeedback, with its emphasis on self-regulation, active health maintenance, and the emergence of higher human potentials, had tremendous appeal.

C. CURRENT TRENDS

Biofeedback today is usually practiced as part of a comprehensive treatment approach called *clinical psychophysiology,* which is a form of mind-body

medicine that uses current knowledge of learning principles and an understanding of physiologic functioning to produce changes in mind and body. The emphasis is on patients learning self-regulation through the acquisition of knowledge and the mastery of voluntary control skills. This self-regulation approach empowers the individual to take a more active role in his or her own health and well-being.

This approach is a holistic model to conceptualize the patient's presenting problem in terms of a biopsychosocial totality (Engel, 1980). Many mental health problems have a biological, biochemical, and genetic component. Yet the individual's life experiences, core relationships, coping skills, and social supports all play a role in the current distress. Most individuals present more symptoms at times of family or work stress, or when core relationships are threatened.

Once an individual responds to stress, the problem becomes *psychophysiological.* In other words, both mind and body are involved in a negative vicious cycle - negative thoughts, negative emotions, physiological tensions, and a combination of emotional and physical symptoms. Thus, recovery or healing should involve a positive cycle-positive thoughts, emotional release, physiological relaxation, and positive feelings of well being.

In accordance with this bio-psycho-social model, biofeedback practitioners typically design a customized behavioral treatment package for each patient that may include:

Education regarding physiology relevant to the presenting symptoms
Relaxation skills training, including progressive muscle relaxation, autogenic training, and diaphragmatic breathing
Stress-management to buffer the family or job problems exacerbating physical symptoms (Lehrer and Woolfolk, 1993)
Instruction in sleep hygiene
Cognitive restructuring to modify thought patterns that maintain physical tensions
Behavior therapy program to reduce maladaptive or self-defeating behavior
Physiological monitoring during psychotherapy that utilizes autonomic nervous system arousal to identify unconscious or implicit emotional issues (Wickramasekera, 1998b)

Clinical psychophysiology combines biofeedback with other intervention modalities, including hypnosis, relaxation therapies, psychotherapy, behavior therapy, cognitive therapy, brief dynamic psychotherapy, stress management, exercise and activity therapy, and medication. Emphasis is placed on education as a valuable component in patient treatment.

II. RELEVANCE FOR MENTAL HEALTH: RELATIONSHIPTO PSYCHOLOGICAL (MENTAL/EMOTIONAL) DISTRESS

A. GENERAL USES IN RELAXATION AND STRESS MANAGEMENT

Both life stress and the *stress response* play a role in the mental and emotional suffering of many human beings in everyday life, including many individuals who never develop a full-fledged psychiatric disorder. Herbert Benson (1975) revealed that a "relaxation response" parallels the stress response. The relaxation response involves a quieting of the organism—emotionally, physiologically, and biochemically. When an individual learns to quiet mind and body, the destructive impact of the stress response is reversed. Regular relaxation is restorative for the entire organism. Benson's initial research used transcendental meditation as the tool to evoke the relaxation response. Since Benson's initial research, however, research has documented the restorative and health-enhancing effects of many kinds of relaxation, including meditation, progressive muscle relaxation, autogenic training, hypnosis and self-hypnosis, and diaphragmatic breathing.

Biofeedback adds a powerful tool to facilitate relaxation training. For instance, a clinician can show individuals a number of systems in their bodies that are tense or overactivated. Although many relax their thinking, their musculature remains tense. Others relax the muscles, but the hands remain cold, revealing autonomic system overactivation and a constriction of the arteries. With biofeedback, typical patients in a mental health clinic can set aside many tensions and learn to relax their bodies more rapidly and completely when either visual or auditory feedback guides their mastery of relaxation.

B. USES IN COGNITIVE BEHAVIOR THERAPY AND PSYCHOPHYSIOLOGICAL PSYCHOTHERAPY

Biofeedback instruments can transform ordinary dynamic psychotherapy into a more powerful mind-body therapy, also called psychophysiological psychotherapy (Moss & Lehrer, 1998). Accordingly, preliminary relaxation training enhances the patient's initial receptiveness to psychotherapy and eases the emergence of emotions and conflicts. Biofeedback, therefore, can provide an invaluable tool in preparing a patient for cognitive-behavioral therapy protocols.

C. SPECIALIZED PROTOCOLS FOR COMMON DISORDERS

Over the past two decades, the understanding of human physiology has improved dramatically. The stress response is a complex process that involves a balance among the central nervous system (CNS), the sympathetic nervous system (SNS), and the parasympathetic nervous system (PNS). Individuals differ in whether stress shows predominantly in CNS, SNS, or PNS channels and which organ systems show stress-related changes to the greatest degree. Specialized protocols have been developed to address problems most frequently encountered in mental health clinics, including anxiety, depression (Rosenfeld, in press), the addictions (Trudeau, 2000), schizophrenia, attention deficit hyperactivity disorder (Lubar & Lubar, 1999), closed head injury, and memory function deficits. Several protocols will be discussed in Section V of this chapter.

III. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATION

A. SAFETY OF BIOFEEDBACK INSTRUMENTATION

Many of the larger equipment manufacturers now obtain Federal Drug Administration (FDA) approval for biofeedback instrumentation systems as medical devices by submitting themselves to the rigorous scrutiny of FDA standards. Smaller manufacturers often market devices as *educational* tools to avoid FDA approval. Nevertheless, several precautions are in use *on all systems* to safeguard the patient. Currently, most systems are battery operated so that when biofeedback systems interface with an AC-powered computer, optical isolation prevents shock. In addition, disposable electrodes are available for most systems to avoid contamination from patient to patient.

B. PROTOCOLS FOR SAFETY IN TREATMENT

Today, many individuals are searching for more natural forms of treatment that are in harmony with the body's healing resources. They are wary of medications because of adverse effects, sedation, or just not feeling like themselves when on some medications. Biofeedback is not physically intrusive. The skin is never broken in normal biofeedback treatment protocols. No chemical substances are introduced into the body to alter biochemistry or

hormonal balance. The effect of most biofeedback therapies involves retraining physiology to more closely resemble the normal physiological state.

Nevertheless, self-regulation is a powerful tool; some benign and transient effects are possible. For example, some report anxiety or uneasiness when they first learn relaxation. For some, the unfamiliarity of inward quieting can be frightening. For others, relaxing the body lowers long-held physical inhibitions for painful emotions. As emotions enter awareness, anxiety or distress is common. This distress is usually moderate, although it is occasionally traumatic. Individuals with past trauma in their lives are more likely to encounter such subjective distress.

Modifying physiological processes is most dangerous when the patient is in a fragile state due to a severe or life-threatening illness such as chronic respiratory or heart disease. Assisting these patients to modify bodily functions that are not well regulated by medicine is a dangerous challenge. Biofeedback with such patients is only recommended when the physician and biofeedback therapist work closely and regularly to monitor changes in the patient.

C. COMPATIBILITY WITH CONVENTIONAL CARE

Ian Wickramaskera published a number of reports on the utilization of biofeedback in health care settings (Wickramasekera, 1988, 1998a, 1998b, in press). Biofeedback and clinical psychophysiology provide a reliable bridge between standard medical care and behavioral care. For the physician, the language and concepts of psychophysiology are more familiar and credible than psychological approaches such as dynamic psychotherapy or family systems therapy. Most biofeedback interventions aim to modify specific physiological processes and are designed in terms of underlying psychophysiological mechanisms that research has shown to be involved in the etiology of a disorder.

Biofeedback also provides a bridge for the patient who, in many cases, is already suspicious of being told that his or her symptoms are "in your head." Many patients feel personally invalidated when referred to a psychologist. Biomedical instrumentation, wires, sensors, and computer displays of physiology reassure many patients. This quasi-medical presentation serves as a Trojan horse for the patient (Wickramasekera, in press). The patient lowers his or her guard to allow the biomedical procedure to take place. As the patient is guided by biofeedback to relax and as trust develops toward the therapist, most patients spontaneously begin to express their psychosocial distress as well.

Patients can begin biofeedback and learn necessary skills while on psychotropic medications unless they are so heavily sedated as to block awareness

and learning. Research shows additive benefit from combining medication and biofeedback for headache, depression, and anxiety disorders. A close working relationship between the prescribing physician and the biofeedback therapist is crucial, because many medicines, including insulin, stimulant medications, and seizure medicines, require adjustment as the patient learns self-regulation and reduces physiological tensions.

D. CONTRAINDICATIONS FOR BIOFEEDBACK TREATMENT

A number of conditions raise caution concerning the use of biofeedback, including patient age, mental retardation, psychotic disorders, the presence of life-threatening medical disorders, and personality disorders. These conditions remain cautions, however, not absolute contraindications. Biofeedback can be tailored to the intelligence level, degree of insight and motivation, and level of cooperation of a specific patient. This author has used biofeedback effectively with individuals of advanced age, developmentally disabled persons, schizophrenics, and many persons with personality problems. The initial assessment should determine whether a positive working alliance can be established and whether the individual can understand and accept the goal of self-regulation. The biofeedback practitioner should remain in close communication with the primary care physician regarding the training objectives and their possible impact on the person's medical condition. Breath retraining, for example, may set off an asthma attack. Thus, the patient should carry their inhaler into all treatment sessions.

Major losses, family conflicts, and stressful environments will distract from biofeedback learning, block generalization of learning to daily life, and diminish benefits. Patients should be assisted with these life problems prior to beginning biofeedback, or as soon as they emerge in the course of biofeedback.

The most common contraindication for biofeedback treatment, however, is a closed mind. Every health care provider will meet individuals who resist voluntary control training in favor of passive treatment with medication via a physician. "Do something and end this symptom for me" is a common appeal and a clear obstacle to self-regulation.

IV. BIOFEEDBACK AND EVIDENCE-BASED TREATMENT

Biofeedback emerged directly from laboratory research on psychophysiology and behavior therapy and it continues to rely on pure and applied empiri

cal research. Pure research takes place largely in laboratories and seeks new understandings of primary neurophysiological mechanisms underlying disorders such as panic disorder and hypertension. Better recognition of underlying mechanisms inspires new biofeedback treatment approaches. Robert Freedman has conducted sophisticated investigations identifying vascular mechanisms and regulators involved in Raynaud's disease. In one study, he was able to measure the changes in blood flow during behavioral treatment of Raynaud's, which revealed that the treatment impacted directly on physiological processes.

Research on brain function has inspired neurofeedback interventions. Recognition of the abnormal brain wave activity in children with attention problems played a role in Joel Lubar's pioneering approach to attention deficit disorder (Lubar & Lubar, 1999). Similarly, R. J. Davidson's research (Davidson, 1995) on the relative inactivity of the left frontal lobe in patients with depression inspired Peter Rosenfeld to develop his "asymmetry training protocol" for the treatment of depression (Baehr, Rosenfeld, & Baehr, 1999; Rosenfeld, in press).

A large body of empirical studies has accumulated on the efficacy of biofeedback, including many controlled studies without blinding, wait list control studies, and ABA crossover type studies, where a group serves as its own control. In a typical ABA study, subjects are trained to modify a physiological parameter consecutively in opposite directions (creating condition A and condition B). In one ABA study (Lubar & Shouse, 1976), the single subject was an 8-year-old hyperactive child. He was initially trained (A condition) to increase faster wave brain activity and suppress slower wave activity, with an accompanying dramatic improvement in behavior. In the B condition he was trained to increase slow wave activity and suppress faster wave activity, at which time the behavioral improvements were reversed. Finally, he returned to the original standard training goals and achieved good long-lasting improvements in several behavioral criteria.

There are several reviews of research oriented to assessing the efficacy of biofeedback for various disorders. The Association for Applied Psychophysiology and Biofeedback (AAPB) has published a series of white papers on biofeedback applications, each compiled by a respected researcher or practitioner. A 1995 publication includes white papers summarizing current treatment protocols and outcomes research on 14 conditions, ranging from anxiety and attention deficit hyperactivity disorder (ADHD) to temporomandibular disorders and urinary incontinence (Amar & Schneider, 1995).

The AAPB published two editions of a book summarizing outcomes research demonstrating clinical efficacy and cost-effectiveness of biofeed-

back (Shellenberger & Amar, 1989; Shellenberger, Amar, Schneider, & Turner, 1994). The 1994 edition presents a bibliography of efficacy studies that meet four criteria. The four criteria are (a) The therapy is clinically efficacious in comparison to appropriate control groups and the results of treatment are statistically significant, (b) The replication studies report similarly efficacious results, (c) Efficacy is demonstrated in long-term follow-up studies that are conducted in clinical settings using clinical treatment protocols, and (d) The therapy has no contraindications. Table II shows several conditions that met the efficacy criteria at the time of the 1994 publication.

In a 1995 publication regarded as the most authoritative foundation for clinical biofeedback practice, Schwartz and associates categorized biofeedback applications according to the quality of outcome research supporting each application. Schwartz ***et*** al. (1995, pp. 108-109) reported that abundant empirical research has demonstrated biofeedback's efficacy for the following disorders: tension-type headache, migraine headache, Raynaud's disease, urinary and fecal incontinence, essential hypertension, and nocturnal enuresis. At least some research supports good outcomes with insomnia, anxiety disorders, chronic pain, attention deficit disorder (ADD) and ADHD, functional nausea and vomiting, irritable bowel syndrome, motion sickness, asthma, bruxism and temporomandibular disorder (TMD), tinnitus, phantom limb pain, and secondary Raynaud's symptoms. Additionally, there are case reports of positive outcomes for biofeedback with writer's cramp, esophageal spasm, occupational cramps, blepharospasm, dysmenorrhea, visual disorders, some dermatological disorders, diabetes mellitus, fibromyalgia, and menopausal hot flashes. Schwartz and associates (in press) are updating their book to cover research published since 1995.

A new volume by Moss, Wickramasekera, McGrady, and Davies (in press) reviews mind-body medicinal approaches for 19 common disorders, including anxiety, attention deficit, asthma, chronic fatigue, chronic illness, connective tissue disorders, coronary disease, depression, diabetes, disorders of elimination, fibromyalgia, headache, hypertension, hyperlipidemia, irritable bowel syndrome, musculoskeletal pain disorders, sleep disturbance, TMD and facial pain disorders, and women's health problems. The book overviews nine complementary medicine treatment approaches, including biofeedback, neurofeedback, relaxation training, hypnosis, cognitive behavioral therapy, manual therapies, acupuncture, nutrition, and Ayurvedic medicine. The applications chapters include reviews of efficacy research on biofeedback and other relevant complementary treatments for each disorder.

Table II
Documented Efficacy of Biofeedback
(Shellenberger, Amar, Schneider, and Turner, 1994)*

Anxiety disorders	Motion sickness
Asthma	Myofacial pain, TMJ pain, mandibular dysfunction
Attention deficit hyperactivity disorder (ADHD)	Neuromuscular disorders (i.e., Bell's palsy, whiplash, muscle-tendon transfers, joint repair, torticollis, stroke, peripheral nerve problems, spasm, incomplete spinal cord lesion, lower motor neuron lesion, ataxia, dystonia, paralysis)
Cerebral palsy	
Disorders of intestinal motility (irritable bowel syndrome, rectal pain, rectal ulcer)	
Enuresis	Pain: Chronic
Epilepsy	Pain: Rheumatoid arthritis
Essential hypertension	Raynaud's disease
Headache: Migraine	Stroke
Headache: Tension	
Incontinence (fecal and urinary)	
Insomnia	

* Adapted with the permission of the Association for Applied Psychophysiology and Biofeedback

Byers (1998) has assembled the available research on EEG biofeedback and neurotherapy, including outcome studies, in a large volume covering several thousand studies.

In January 2000, a special issue of the journal *Clinical EEG: Electroencephalography* included seven articles on EEG biofeedback treatment of common disorders *(Clinical EEG,* 2000). This special issue reviewed treatment protocols and efficacy research for anxiety disorders, affective

disorders, addictive disorders, schizophrenia, ADHD, traumatic brain injury, and seizure disorders. In that volume (pp. 39-40), Thatcher rated the clinical efficacy of EEG biofeedback as ranging from 40-95% for the seven disorders covered. The issue editor, Frank H. Duffy, described the outcomes research on anxiety, ADHD, and seizures as best documented, whereas there is positive evidence for efficacy in the other three disorders, but further documentation is necessary.

V. PROTOCOLS FOR APPLYING BIOFEEDBACK TO COMMON MENTAL HEALTH PROBLEMS

Following is a brief outline of the available general biofeedback and EEG neurofeedback protocols available for intervention. The reader will be referred elsewhere for references on relevant anatomy and physiology, summaries of outcomes research. and a more detailed discussion of the treatment interventions.

A. ATTENTION DEFICIT HYPERACTIVITY DISORDER

ADHD is a disorder of epidemic proportion affecting **6-9%** of children today (Resnick, 2000). The conventional medical treatment for ADHD is stimulant medication, which benefits about 60-70% of those medicated (Barklay, 1990). This leaves a large group unimproved. Ancillary medication strategies are also used, including antidepressants, antiseizure medicines, and combinations of medications (Resnick, 2000). About 25-50% of patients on stimulants report adverse effects. A recent National Institute of Health Consensus Conference emphasized in its report the serious lack of long-term information available on long-term stimulant use. Many patients and families are motivated to seek alternative, nonpharmaceutical strategies due to adverse medication effects, inadequate improvement on medicine, or a general aversion to daily medication.

Brain physiology provides clues to what alternative therapies should accomplish (Lubar, in press; Lubar **&** Lubar, 1999; Nash, 2000). The EEG of individuals with ADHD show predominance in frontal brain regions of slow wave electrical activity in the theta range and a deficit in faster wave electrical activity in the beta range. This predominance of slow wave activity worsens when the individual is given a cognitively challenging task such as math. Studies using SPECT scanning confirm a lower blood flow to frontal areas as well, which indicates that these areas are not functioning effectively. Pet scans show a metabolic underactivity in the same areas. The frontal areas of the brain affected are important to planning and organizing activity. Three

distinct frontal areas affected contribute in overlapping ways to planning and organizing behavioral schemas, inhibiting maladaptive actions, and executing well-organized trains of behavior (Barklay, 1997; Lubar, in press). The ADHD child or adult is deficient in focusing, planning, organizing, and executing well-organized and appropriate action as well as in canceling out ill-advised and impulsive actions. When presented with academics that should evoke more focusing activity, the ADHD brain often becomes less focused.

General biofeedback can be useful in reducing the hyperactivity component accompanying ADHD. Using a surface electromyography (EMG) instrument, the patient is trained to reduce forehead muscle tension, which in turn moderates restless behavior. This EMG training has limited overall impact. Thus, it should be integrated as part of a total EEG neurofeedback treatment plan.

EEG neurofeedback targets the abnormal brain wave activity. The neurofeedback practitioner begins with a thorough behavioral and psychometric assessment of the patient's attention problem. Next, the practitioner will often do a quantitative EEG (QEEG)—that is, a digitized statistical analysis of electrical activity at 19 different sites on the standard EEG "montage." This tells the practitioner which areas are abnormal in activity level and where neurofeedback training will be most effective. Because of cost and availability, not every practitioner uses a QEEG. Many begin with placing sensors at standard sites along the midline of the patient's brain.'

After an initial baseline, the patient commences neurofeedback training for a period of anywhere from 25-50 sessions. The EEG display uses auditory signals (tones and music) and visual displays to guide the patient to increase faster wave activity in the beta range and to suppress slower wave theta activity. The patient's ratio of theta/beta activity may also be displayed. Table III shows the common designations for cortical frequency ranges. At the same time, most neurofeedback systems also track muscle activity in order to guide the patient to continue relaxing the adjacent muscle groups. This is beneficial in reducing any hyperactivity. It is also necessary to prevent EMG range muscle activity from interfering with accurate measurements of brain activity.

The visual and auditory displays can be sophisticated in order to keep a child or bored adult interested in the learning process. Some software provides

Lubar has suggested placing the sensors in most cases along the midline, with one active electrode halfway between Fz and Cz, the second halfway between Cz and Pz, a ground on the forehead, and two ear clips as electrically inactive reference points.

If the individual is hyperactive, Lubar recommended a preliminary training phase in which the individual learns to increase the sensory-motor-rhythm (SMR) over the brain's sensory motor cortex, to reduce hyperactivity and restlessness (Lubar, in press; Lubar & Lubar, 1999). This enables the individual to cooperate better with the overall neurofeedback training.

Table III
Commonly Used Designations of Cortical Frequency Ranges

Frequency Range (Cycles/Second)	**Label**	**Subjective State**
2-4 Hz	Delta	Sleep States
4-7 Hz	Theta	Daydreaming, imagery
8-13 Hz	Alpha	Awake, receptive meditative
13-25 Hz	Beta	Activated, focused
13-15 Hz	SMR	Special subset of Beta range with focused thinking

Researchers vary in precise cutting points for these frequency ranges.

animations such as a skeleton, a Pac-man, mazes, or a spacecraft. Each of these animations moves forward when the patient moves his or her brain activity in the desired direction. Some individuals respond better to watching a simple bar graph, digital displays, and verbal encouragement.

The Lubar protocol that is widely used includes academic activity (reading, mathematics, and homework) during the training sessions. This encourages patients to generalize their enhanced attention to academic learning activities. Lubar and others have reported substantial normalization in the brain electrical activity, with increased beta wave activity and reduced theta wave activity. They also have reported improved school performance, better on-task behavior, and elevations in psychometric testing, including behavior checklists, "continuous performance tests," Wechsler IQ scores, and achievement testing (Lubar, in press, Lubar **&** Lubar, 1999; Nash, 2000).

B. DEPRESSION

Depression is one of the most common problems in the medical and mental health clinics. It is a disabling disorder with documented genetic, biochemical, interpersonal, and cognitive dimensions. Current estimates show that it will be the second most disabling medical condition by the year 2020 (Murray **&** Lopez, 1996). The conventional treatment for depression is a combination of antidepressant medications and cognitive behavioral therapies.

General biofeedback can assist the depressed individual through generalized reduction in tension and worry. Tension, anxiety, and worry amplify the intensity and desperation of depression. Tense, ruminative individuals are

more likely to become actively suicidal. Training the individual with EMG biofeedback to relax the expressive musculature of the face, neck, and upper torso calms the individual and moderates worrisome thinking. Training the individual with thermal biofeedback (TEMP) or electrodermal biofeedback (EDR) deepens the individual's subjective peacefulness and moderates the agitation that accompanies depression. This combination assures relaxation of organ systems governed by the central nervous system and autonomic nervous systems.

Peter Rosenfeld introduced a neurofeedback training protocol that directly moderates depressed mood (Rosenfeld, in press; Rosenfeld, Cha, Blair, & Gotlib, 1995). The Rosenfeld asymmetry protocol is a patented intervention based on the neurophysiological research of Richard Davidson. Davidson's research showed relatively lower activation of cortical electrical activity in left frontal areas of the brain compared to right frontal areas. Patients with right frontal brain lesions that reduce right frontal function show more positive affect. Patients with left frontal lesions tend toward depression. Davidson hypothesized that the left frontal area comprises a positive affect or approach system and the right frontal area a negative affect or avoidance system (Davidson, 1995). A series of studies documented that a person's resting brain asymmetry-the relative activation dominance of right versus left frontal areas-predicted the person's response to emotionally laden film clips. Further research confirmed that currently depressed individuals have left frontal hypoactivation; their positive affect/approach system is less activated (Henriques & Davidson, 1991; Rosenfeld, in press).

Rosenfeld utilized EEG to train subjects to increase faster wave cortical activity on the left side relative to the right side. Subjects showed a shift toward more positive mood on both *state* and *trait* measures. Patients reported better present-moment mood, but also showed a tendency toward positive cognitions. Patients who increased the relative activation of the left frontal area interpreted new events more positively as they occurred. Beck depression scores have significantly improved in each of Rosenfeld's studies. Details of the current training protocol can be found in Rosenfeld (in press). License to use this protocol is available from Dr. Rosenfeld at Northwestern University.

For methodological reasons, Rosenfeld actually trained slow wave alpha activity down, rather than training fast wave activity up. Nevertheless, the outcome is equivalent. The result is a relatively greater activation or predominance of faster waveforms in the left frontal system after training (Rosenfeld, in press).

C. ANXIETY DISORDERS

Anxiety disorders present one of the most frequent complaints in mental health and medical clinics, affecting approximately 15% of the population in the course of their lifetime (Regier, Narrow, & Rae, 1990). The anxiety disorders are classified according to objective diagnostic criteria, following the Diagnostic and Statistical Manual of Mental Disorders (or DSM-IV), the diagnostic manual of the American Psychiatric Association (APA, 1994). The DSM-IV classifies anxiety problems into panic disorder, the phobias, generalized anxiety disorder, obsessive-compulsive disorder, post-traumatic stress disorder, acute stress disorders, and "adjustment disorder with anxious features." Correct assessment and diagnosis of anxiety disorders is important, because it leads to a more effective treatment plan tailored to the specific disorder (Moss, in press; 2002).

Today's treatment of anxiety disorders relies heavily on cognitive-behavioral interventions that enable the anxious individual to:

- Modify cognitive schemas that elicit anxiety
- Modify specific thoughts and attributions that trigger anxiety
- Teach adaptive copings skills, including relaxation skills
- Assist the individual to confront and master anxious situations
- Reduce avoidance behaviors that interfere with mastery of situations

Biofeedback can enhance the effectiveness of cognitive-behavioral therapy in each stage of treatment.

General relaxation training assists the individual in overcoming anxiety (Amar, 1995). Thermal biofeedback is effective at producing general autonomic relaxation, reducing the subjective jitteriness reported by most anxious persons. EMG (muscle) biofeedback is helpful in relaxing the expressive muscles of the face and upper torso. Most anxious persons show tense muscles around the eyes and in the jaw, neck, shoulders, and arms, expressing states of worry, frustration, anger, and apprehension. EDR (electrodermal) biofeedback is useful in training the individual to decrease worrisome thinking, and quiet thought processes.

The most common neurofeedback protocol for anxiety involves training the individual to increase the production of alpha-range brain wave activity. This alpha brain state is a relaxed, open, receptive state of mind that inhibits much of the worry and anxious thinking that accompanies anxiety disorders. Some authors also have trained an increase in theta brain activity, another slow brain wave.

Two recent studies report that patients with anxiety disorders occasionally present with already abnormally high amounts of slow wave brain activity (Sattlberger & Thomas, 2000; Thomas and Sattlberger, 1997). The usual slow wave training may increase the patient's anxiety, whereas training the indi-

vidual to suppress slow wave activity and enhance faster wave brain activity is more helpful in anxiety reduction.

In summary, both general biofeedback and neurofeedback offer a number of interventions that can augment the treatment of anxiety. These treatment modalities offer hope especially for patients who fail to respond to a variety of dynamic, cognitive-behavioral, and medication treatments.

D. ALCOHOLISM AND THE ADDICTIONS

Alcoholism and drug abuse represent a problem area challenging treatment teams everywhere. From 40-60% of patients completing treatment will relapse within a year. Brain function in individuals with addictions shows a number of distinct features. Alcoholics and addicts show lower levels of dopamine and norepinephrine in the mesolimbic reward areas of the brain (Walters, 1998). The frontal areas of the addict's brain frequently show a deficiency in alpha, theta, and delta rhythms, and excesses in beta range cortical activity. Ingestion of alcohol increases alpha range activity in magnitude and slows the dominant alpha frequency. This effect is enhanced in men and in those with a family history of alcoholism. In other words, alcohol and some drug abuse enables the brain to shift electrical activity downward into a more relaxed and pleasurable state of consciousness.

The primary approach applying biofeedback to alcoholism and the addictions follows the "Peniston protocol," developed by Peniston and Kulkoski (1989; 1990), which integrates general biofeedback with neurofeedback interventions. The Peniston protocol draws on earlier neurofeedback work inspired by Elmer Green and colleagues at the Menninger Clinic in Topeka, Kansas (Trudeau, 2000). The protocol includes the following components:

- Thermal biofeedback training (hand-warming)
- Respiration training (paced diaphragmatic breathing)
- Autogenic relaxation training
- Visualization exercises, involving images of rejecting alcohol, building abstinence, increasing social comfort, and relaxation
- Neurofeedback to increase the production of frontal slow-wave cortical activity (brain waves in the alpha and theta ranges)

The neurofeedback component enables the substance abuser to enter brain states that he or she could formerly only access through alcohol or drugs.

The Peniston and Kulkosky (1989, 1990) publications presented claims of dramatically reduced relapse rates, with 80% of the experimental groups showing abstinence at follow-up and only 20% of the control group showing

abstinence at follow-up. Peniston and Kulkosky also reported positive personality changes and decreases in depression and anxiety. Many clinicians enthusiastically report successful intervention with alcoholics and addicts, including substance abusers with particularly poor prognosis, such as prison populations and substance abusers with co-morbid symptoms of post-traumatic stress disorder (Fahrion, 1995; Walters, 1998).

Several teams have replicated the Peniston/Kulkosky studies, showing improved outcomes compared to traditional addictions treatment (see reviews by Walters, 1998, and Trudeau, 2000). Trudeau (2000) showed that critical differences in methodology, interventions, subject populations, and lack of adequate controls prevent a reliable scientific assessment of this protocol. In particular, the relative contributions by each component in the treatment package, including neurofeedback, have not been clarified. Taub, Steiner, Smith, Weingarten, and Walton (1994) showed that other (non-neurofeedback) interventions eliciting deep relaxation, including EMG biofeedback and transcendental meditation, can also produce significant reductions in substance abuse relapse.

In summary, additional research remains necessary to clarify which components in the Peniston protocol are most important in reducing relapse in substance abusers. Nevertheless, existing research studies and numerous clinical reports suggest that a combination of relaxation training, visualization exercises, and biofeedback/neurofeedback can significantly reduce relapse in alcoholics and drug addicts.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

A. PROFESSIONAL ORGANIZATIONS AND CERTIFICATION BODIES

Association for Applied Psychophysiology and Biofeedback (AAPB)
Web site http://www.aapb.org

Biofeedback Certification Institute of America
Web site http://www.bcia.org/

International Society for the Advancement of Respiratory Physiology (ISARP)
Web site http://cscwww.cats.ohiou.edu/~isarp/

Society for Neuronal Regulation (SNR)
Web site www.snr-jnt.org

Society for Psychophysiological Research
Web site http://www.wlu.edu/~spr/

B. PROFESSIONAL ETHICS AND PRACTICE STANDARDS

In 1999, AAPB published a complete revision of its *Standards and Guidelines* by Sebastian Striefel (1999), with a broadened discussion of practice standards for the expanding field of biofeedback and self-regulation therapies. This was adopted as the official policy.

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Chapter 8

Meditation and Self-Regulatory Techniques

Keith G. Lowenstein, MD

I. OVERVIEW OF MEDITATION AND SELF-REGULATORY TECHNIQUES

A. INTRODUCTION

This chapter reviews self-regulatory and meditative techniques. Relaxation and concentration exercises are self-regulatory techniques that induce the physiological states that are the foundation of meditation. There are a wide

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variety of relaxation and self-regulatory techniques that, in general, induce a physiologic relaxation within the person practicing them. The effect is largely mediated through the nervous system but has profound effects on all the organ systems of the body. Self-regulatory techniques can be used to benefit many psychological and physical disorders, including cardiovascular disease, respiratory dysfunction, immune dysregulation, pain, irritable bowel, depression, anxiety, and many others. Some examples of self-regulatory techniques include the relaxation response, autogenic training, guided imagery, abdominal breathing, chanting, and mindfulness. This chapter includes an introduction to the anatomy, physiology, philosophy, psychology, and clinical use of self-regulatory techniques as well as the scientific research that supports its use in health and illness. The chapter closes with a brief review of references and resources for meditation and self-regulatory techniques.

B. WHAT Is MEDITATION?

Meditation is an inner art and science practiced by humanity for thousands of years. Meditative practice is common to Eastern and Western religious and spiritual traditions. Just as there are numerous Eastern-based meditative disciplines, the Judeo-Christian and Moslem faiths all have a strong heritage of meditative practice. Although the philosophy and belief systems may vary among these traditions, the actual techniques share many similarities. Most of the examples used here are from the yoga tradition of Patanjali's Yoga Sutras (Aranya, 1983), also referred to as Raja Yoga (Sivananda, 1974) or Kriya Yoga (Ganesh, 1980; Yogananda, 1955). The meditation practiced in this tradition is a breath oriented multitasking meditation. Other self-regulatory and meditative techniques such as the relaxation response (Benson, 1975) and mindfulness meditation (Kabat-Zinn, 199 1) will be used for certain comparisons.

The practice of meditation leads to a reproducible physiological state; any person in a similar state of physical and psychological health who follows certain steps will achieve a corresponding meditative state. Our body-mind machine comes with all the hardware and software needed to meditate, we just need to install it, learn how to use it, and customize it for ourselves. Different people will resonate with different techniques; no single technique is better than another.

C. WHY MEDITATE?

People choose to pursue meditation for many reasons. In the last few decades research has demonstrated that meditation has a number of physical

and mental health enhancing properties. In modern-day society it is increasingly important to decrease the chronic stress arising from our daily experiences. The chronic stress reaction (an attenuated yet protracted fight-or-flight response) leads to a cascade of events that increases sympathetic tone and catecholamine levels. This in turn up-regulates the hypothalamus-pituitary-adrenal (HPA) axis, which among other things elevates glucocorticoid levels. Although these changes are helpful in acute stress, chronic elevation is disease inducing. It is now well known that chronic elicitation of the stress response can lead to the development of physical and psychological stress-related illness that can be life limiting if not life threatening (Everly ***et*** al., 1989). The regular practice of a self-regulatory technique will result in a number of beneficial psychological and physical changes. These changes are outlined in the psychology and physiology sections, respectively.

D. BASIC ELEMENTS OF MEDITATION

1. Intent

As with any new skill, success will be limited without a sincere effort. Meditation is a process that requires skill development in a number of areas. Nothing in meditation is particularly difficult although it takes practice to achieve results. That is not to say that some people come by meditative experiences without hard work, it's just that spontaneous enlightenment is the exception, not the rule.

2. Environment

A beginner usually does better in a quiet setting. It is best to practice meditation at the same time of day and in the same place. This association of time and place will help support the physiological changes that take place in meditation.

3. Anatomy

a. Posture

Overall posture should be alert and erect. Ideally your body should feel as though your head and spine are suspended from a string attached to the vertex of your head. The spine should be erect yet relaxed and flexible. A slouched posture will interfere with both respiratory and central nervous system function. Beginners who attempt meditation while lying down will likely fall

asleep due to our body's conditioned response. In general, beginners do best when seated on a chair with good support or on a pillow on the floor. Eyebrows can be raised or relaxed, not tense or frowning. Eyes can be either open or closed depending on the specific meditation. There are a variety of techniques for either open- or closed-eye meditations. These techniques aid in sensory retraction. The lips can be partially open or pursed to allow the breath to be exhaled. The tongue is placed on the roof of the mouth just behind the front teeth. The jaw should be relaxed and not clenched. Shoulders should be back and relaxed, not rounded or slouched forward. There should be a focused intent that is evident in the overall posture.

b. Spinal Awareness

It has been said, you are as young as your spine. Spinal flexibility and strength are the backbone of health and well-being. Yoga views the spine as the body's antenna to Carl Jung's synchronicity, collective unconscious, and beyond. For the life force (Chi, prana, biopsychic energy) to flow freely in the central nervous system (CNS), the spine must be erect, strong, and flexible. The spinal cord is part of the CNS, which includes the autonomic nervous system (ANS). The spinal cord runs through the vertebral column, carrying information back and forth, contributing to the maintenance of homeostasis. It may be the modulation of this information flow that constitutes the final common pathway, setting off the cascade of beneficial effects initiated by self-regulatory techniques.

c. Diaphragm

The diaphragm is among the largest, most important, yet most neglected of the human muscles. The diaphragm is our primary respiratory muscle. The diaphragm is a dome-shaped muscle that inserts on its own large central tendon originating from the xyphoid process, costal cartilage of the last six ribs, the fifth lumbar vertebrae, and the medial and lateral arcuate ligaments that pass over the psoas major and quadratus lumborum, respectively. These ligaments attach to the first and second lumbar vertebrae and are continuous with the anterior longitudinal ligament of the vertebral column. The diaphragm is also attached to the pericardium, pleura and has apertures through which pass the vena cava, aorta, and esophagus. As this brief review of the anatomy shows, the diaphragm is intimately tied to the spine, forming yet another integral connection between breath and posture.

Diaphragm dysfunction as a result of spasm is frequently associated with physical and psychological trauma, back pain, respiratory problems, and anx-

iety. Regular abdominal breathing exercises can improve many of these conditions. Good diaphragmatic function contributes to improved peace of mind, a more erect and flexible spinal column, and improved general well-being. Sometimes cranial osteopathic treatment (Sutherland, 1990), which addresses diaphragmatic spasm, can help improve breathing patterns and some of the chronic medical and psychiatric problems noted earlier.

4. The Breath

We all take our breath for granted unless it is restricted in some manner. Unfortunately, many individuals have developed a chronic pattern of shallow restricted "chest" breathing that contributes to poor health. It is the diaphragm that effectively pumps the lungs and allows us to breathe. Abdominal breathing helps improve diaphragmatic function and thereby improve respiration. To achieve a full respiration, one must be erect. If one is maintaining a slouched posture the thorax cannot expand as it was designed, thereby limiting the diaphragm's action and lung capacity.

Breath awareness and control are at the root of many self-regulatory and meditative techniques. It is through the breath that we have a direct link to our ANS. To become reacquainted with our breath I often suggest an exercise where one lies down on their back or sits in a chair and places a hand on the abdomen. While doing this, all attention should be on the breath and the movement of the abdomen. If you notice your abdomen moving in and out you are engaging, at least in part, in abdominal breathing. The goal is to increase the percentage of abdominal breathing and decrease or eliminate shallow chest breathing. Many meditative traditions emphasize breathing techniques in order to increase the awareness and practice of abdominal breathing. Pranayama is a set of breathing skills taught in yoga (Sivananda, 1978). Pranayama is not one technique but a variety of breathing exercises that improve oxygenation, mental alertness, sensory retraction, and the ability to maintain focused concentration.

Once you have observed the abdominal motion you have with your breath, begin using your abdominal muscles to gently yet forcibly expel the last bits of air left in your lungs after your natural exhale. You can exhale this air through your mouth with an accompanying whooshing sound or a sigh. When you relax your abdominal muscles your next breath will occur automatically and without effort. Your mouth can be closed at this time, as your inhalation should occur through your nostrils. Sometimes this style of breathing feels "backward," but with time it will feel very natural and calming. When practicing this type of breathing, try to have the exhalation approximately twice as long as the inhalation. Breath

control is a powerful, easy-to-use tool that is at our fingertips. This type of breathing alone will contribute to improved health and well-being.

5. The Mind and Mindfulness

All self-regulatory and meditative techniques strive, in one form or another, to gain control over the restless and preoccupied nature of mind. One goal of meditation is to harness the mind through exercise, breathing techniques, retraction of the senses, and concentration. Different traditions emphasize different aspects of these techniques.

Yogic meditation (Patanjali's Yoga Sutras, illustrated later in Figure 5) utilizes a number of methods to still the mind. The combination of focused attention along with breathing techniques can accomplish this quite nicely. This is achieved through internal concentration on a sound or spiritual phrase (dharana or concentration) while at the same time focusing attention on specific internal or external points (pratyahara or sensory retraction) such as the top of the head, the heart center, the "third eye" in the center of the forehead just above the eyebrows, or a specific external point. When these exercises occur in a synchronized fashion with proper posture and breath, meditation begins. During this process it is not uncommon to experience joy, physical vibration, or an inner light. As evident from this description, yogic meditation tends to have a strong body and mind emphasis.

Mindfulness meditation, when compared with yogic meditation, is somewhat more cognitively oriented and initially focuses more on the mind than the body. Mindfulness has grown out of the Buddhist tradition, and is used as part of other meditative techniques as well. Mindfulness is a voluntary nonjudgmental focused attention. In Buddhist meditation (Rahula, 1974) there is often a specific focus of attention on one of four main categories: the body (kaya), feelings and sensations (vedana), the mind (citta), and morals or intellect (dhamma). Mindful awareness can be brought to any aspect of life. One goal of mindfulness training is to be present in the moment and have mindful awareness throughout all aspects of life.

6. Physical Exercise

Exercise is an excellent way to help maintain health and well-being. Regular exercise will improve meditation by increasing energy, strength, endurance, flexibility, and vitality. Meditation in turn will contribute to an increased physical and mental energy and improved cardiovascular and respiratory function. Anyone can develop an exercise program to fit his or her

needs. A moderate consistent exercise program that is matched with physical ability is all that is required. As with meditation, slow consistent effort is rewarded with increasing benefit in body, mind, and spirit. Anyone who is not accustomed to strenuous aerobic exercise should not attempt it without speaking with a physician. Walking or Hatha Yoga asanas are excellent examples of mild forms of exercise that if practiced in a consistent mindful manner can lead to great overall benefit. Exercises of many types will also help develop spinal strength and flexibility.

7. The Suggested Prerequisites of Meditation

Many meditative and religious disciplines have moral, psychological, social, and spiritual requests for those who join their tradition. In Buddhism this includes the Noble Eightfold or Middle Path (Figure 1), in yoga this is covered in the first two limbs of Patanjali's eight-limbed Yoga Sutras (Figure 2). Both of these traditions correspond with the Judeo-Christian idea of the Ten Commandments. Although adopting these changes is helpful, in many instances the interpersonal and intrapersonal changes take place gradually on their own with the regular practice of the techniques.

Noble Eightfold Path (Middle Path)

1. Right Understanding and Perception
2. Right Thought and Aspiration
3. Right Speech
4. Right Action and Conduct
5. Right Means of Livelihood
6. Right Effort and Endeavor
7. Right Mindfulness-Concentration
8. Right Concentration-Contemplation

Figure 1 Noble eightfold path.

Patanjali'sYoga Sutras:
The first two of eight sutras

I. Yama (restraint)-Interpersonal Fidelity
   1. Nonviolence (Ahimsa)
   2. Truthfulness of Speech and Mind (Satya)
   3. Nonstealing and Trustworthiness (Asteya)
   4. Mental and Physical Control of Sexual Energy (Bramacharya)
   5. Nonpossessiveness (Aparigraha)

II. Niyama (observance): Intrapersonal Fidelity
   1. Self-Discipline. Austerity (Tapas)
   2. Self-Observation. Introduction. Study of scripture (Svadhyaya)
   3. God Remembrance (Isvara-prandhana)
   4. Mental and Physical Cleanliness (Shauca)
   5. Contentment (Samtosha)

Figure 2 Patanjali's Yoga Sutras: The first two of eight sutras.

E. PSYCHOLOGY

1. Eastern and Western Psychologies

Many types of meditative practices, psychologies, and philosophies exist. The goals within these various traditions do differ, but as a whole most Eastern and Western meditative disciplines share some common views with regard to the human psyche. People in the West tend to view the mind as the ultimate source of the truth and reality of the human experience, whereas in the East the mind is seen largely as a filter/sensory organ through which people experience the "illusion" of the world. In the East, consciousness (God, cosmic consciousness, Christ consciousness, or U3 [the Ultimate Universal Unity]) is seen as the ultimate nature of reality. Meditation is seen as the avenue through which one can gain increasing insight in the nature of the mind and ultimately consciousness itself.

The perspective from which these psychologies approach the individual psyche does differ. In Western psychology the focus has tended to be more on the pathology of the mind. It was not until recent years that the West has put forth some effort to define and understand the optimal potential of a healthy human mind. Although Eastern psychology addresses what it sees as undesirable human traits, it tends to see less pathology and more potential in the human psyche than Western psychology.

2. Psychological Change, Psychotherapy, and Self-Regulatory Techniques

The regular practice of self-regulatory or meditative techniques will result in a number of beneficial psychological changes such as improved mood, less anxiety, greater satisfaction with daily activities, less reactivity, improved patience, and tolerance, as well as more compassion, empathy, and joy. Despite these positive changes, the ego can interfere with the path to stress management, wellness, or enlightenment. Rigidly clinging to a persistent personality style that is narcissistic, angry, negative, aggressive, or dependent can make it difficult for these techniques to effect change. In such situations concomitant psychotherapy is strongly encouraged. Other times to consider adjunctive psychotherapy include situations in which an individual's positive change disrupts the dynamics of his or her relationships at home or at work. In addition, many individuals with chronic medical and psychiatric conditions often need psychological and social assistance along with self-regulatory techniques to help them move forward through psychosocial transitions.

3. Belief Systems

Belief systems have always been and will likely remain an integral part of self-regulatory techniques. Meditation is in part seen as a science because specific techniques when followed produce certain physiological effects regardless of belief. On the other hand, belief can influence the rate and intensity of the meditation experience. People often incorporate whatever self-regulatory techniques they learn into the spiritual or religious belief system they already have in place. This is often accompanied by an increased sense of belonging to whatever tradition with which they are affiliated. Most of these techniques can be adopted into any belief system. Some Eastern and Western traditions use devotional prayer as a main technique through which to achieve spiritual insight and enlightenment (Christianity and Bhakti Yoga). Herbert Benson, MD, a cardiologist at Harvard Medical School, has shown

that incorporating one's belief system into the relaxation response can bring forth additional benefits. Dr. Benson has referred to this effect as the faith factor (Benson, 1987). Although a belief system is not needed in order to be successful, it can be a technique in itself and therefore will supplement most other methods. A strong devotional or belief system is, in effect, a mindfulness technique with strong emotional reinforcement.

F. PHILOSOPHY OF MEDITATION: A SYNTHESIS OF EAST AND WEST

A number of excellent models have been introduced in recent years that explore the integration of Eastern and Western philosophies. The *cycle* of *synthesis* (Figure 3) is one such model, which was developed from the 1960s through the 1980s by Sri Mahant Swami Ganesh Anand Giri (Ganesh, 1980) and has continued to evolve since he left his physical body in 1987.

The cycle of synthesis (COS) attempts to integrate Eastern and Western philosophy, cosmology, yoga, medical science, and physics. The model is a two-dimensional attempt to map an eight-dimensional if not infinitely dimensional human experience. The model begins with eight prime categories (dimensions) of human experience (extrapolated from Immanuel Kant's idea of a priori knowledge [Kant, 19341). These prime categories, in combi-

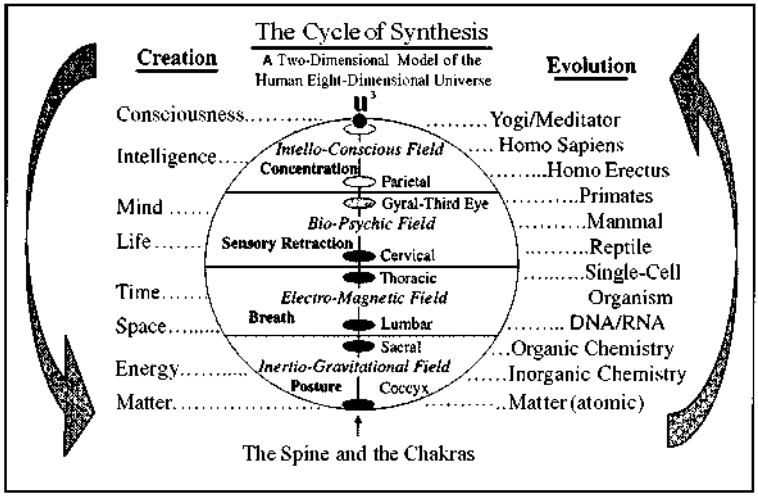

Figure 3 The cycle of synthesis.

nation or by themselves, represent the complete human experience. The eight prime categories in the COS are on the left side of the diagram and in descending order, from consciousness to matter represent creation (consciousness, intelligence, mind, body, time, space, energy, and matter). Evolution on the right side of the cycle starts with matter and moves up toward consciousness. This represents a psychological and spiritual evolution beyond Darwin's biological evolution described in his theory of natural selection.

The COS further breaks down the nature of human reality into four fields that are overlapping and interacting. The fields are based on quantum mechanics and Einstein's theory of relativity. The lower two fields (inertiogravitational and electromagnetic) represent the four-dimensional space-time continuum. The upper two fields (biopsychic and the intelloconscious) are extrapolations of the world beyond space and time. It is in these upper two fields that we find the categories of life, mind, intelligence, and consciousness. The electromagnetic field, on which the other fields are modeled, has the photon as its quanta, which travels at the speed of light. As the electronmagnetic spectrum goes from radio waves (the infra side) to gamma rays (the ultra side), there is a decrease in wavelength with a corresponding increase in frequency. The other fields represent similar phenomena but at varying levels of energy. The corresponding quanta of the inertiogravitational field, the biopsychic field, and the intelloconscious field are the gravitron, bion, and consion, respectively. Each successively higher field has a corresponding higher energy level culminating with the consion of the intelloconscious field. The consion by definition has an infinite velocity; therefore, it is present at every point in space at all times. From an energetic standpoint this definition fits most criteria for consciousness, God, or U3 from either an Eastern or Western perspective.

The COS then takes creation, evolution, and the human experience of reality as described earlier and integrates those ideas with the human body and the meditative process. Each field in the COS corresponds with a specific aspect of the meditative process (posture, breath, sensory retraction, and concentration) as outlined on the diagram. During meditation we are working to exercise each one of these fields through its corresponding self-regulatory technique. This in turn tunes up our CNS and chakras (yoga energy centers) to act as the antenna yogic meditation describes. When these separate self-regulatory techniques synchronize, there is resonance with the four fields and meditation begins. Yoga sees meditation as the way to achieve the human evolutionary goal of union with conscious or **U3.** The COS is a schematic diagram that outlines how self-regulation and meditation help us move up the evolutionary ladder toward improved health, well-being, and union with consciousness.

G. How TO MEDITATE

Find a quiet place where you will not be interrupted, ideally this is a space you set aside for this purpose. Sit with an erect spine and use support for your back if needed. Observe and adjust your overall posture. Start with a slow, deep relaxed rhythmic abdominal breath incorporating various breathing techniques (pranyama) depending on your level of training and experience. The reader is referred to a number of excellent books (Boryshenko, 1987; Hendricks, 1995; Rama ***et al.,*** 1976) that review breathing techniques.

The next step is to address your mind; an untrained mind has much restless energy. It is the goal of meditation to harness and focus that energy. Beginners should focus on the breath, a religious or spiritual phrase, or a sound that has meaning for you. Once you choose this phrase or sound you will need to repeat it in your mind. This technique, along with a fixed point of attention, as previously discussed, will begin the retraction of the outwardly focused senses and the development of concentration. Meditation begins when one has established an integrated dynamic relationship of posture, breath, retraction of the senses, and concentration. Meditative states can then be fine-tuned through a myriad of techniques that vary from tradition to tradition.

Learning mindful concentration through attentiveness is a skill that gets better and more refined with practice, effort, and time. A key element to all self-regulatory techniques and the essence of meditation is to gently return the mind to the center of focus whenever you notice your awareness wandering. To notice these distractions and return to your center of focus is the path of mindfulness and meditation. It is not an indication of failure or a lack of aptitude to find the mind wandering, but part of the meditative process. Each adjustment of focus is an exercise in self-regulation.

When you practice or teach these techniques, you can follow the checklist in Figure 4. With experience this process can be tailored to each patient and introduced in 5 minutes. It is often best to pick only one focus of attention to start, such as the breath or meaningful religious phrase. A concomitant second area of focus should only be taught if the patient wants to move beyond a self-regulatory technique toward meditation.

H. RAJA YOGA OR PATANJALI'S YOGA SUTRAS: THE EIGHT MEANS OF ATTAINING YOGA/UNION

Patanjali's Yoga Sutras (Aranya, 1983) is a system that integrates the body, mind, and spirit toward optimal function. The Yoga Sutras have eight

Meditation Checklist

1. Focused Intent
2. Environment
3. Posture-head, eyes, tongue, jaw, shoulders and spine
4. Breath-abdominal breathing
5. Mindful Awareness and Sensory Retraction-fixed point of attention
6. Repetitive Mental Focus-incorporate your belief system
7. Regular Practice

Figure 4 Meditation checklist.

parts (Figure *5),* which, when systematically pursued, lead to the successful practice of meditation. It is this system that has been used as the basis for the description of meditation. Figure *5* provides an overview of the yoga sutras.

I. PHYSIOLOGIC EFFECTS OF MEDITATION AND SELF-REGULATORY TECHNIQUES

The rich and growing field of psychoneuroimmunology has demonstrated the beneficial physiology of self-regulatory techniques. With each passing year we are gaining new information and understanding into the infinitely complex, interwoven, and interdependent aspects of our body, mind, and spirit. Although the science of psychoneuroimmunology is proving the benefits of self-regulatory techniques from a Western viewpoint, the benefits of these techniques have been known through human experience for thousands of years. It is now accepted that self-regulatory techniques induce what Walter Hesse, a Swiss physiologist and Nobel Prize winner, called the trophotropic response and is similar to what Herbert Benson, MD, called the relaxation response. The trophotropic response has been described as a restorative process that is protective against "overstress" and is seen as the counterpart of the well-known fight-or-flight response. In the 1960s, Herbert Benson, MD, was one of the first to investigate the relationship between stress, relaxation, and the cardiovascular system (Benson, 1987).

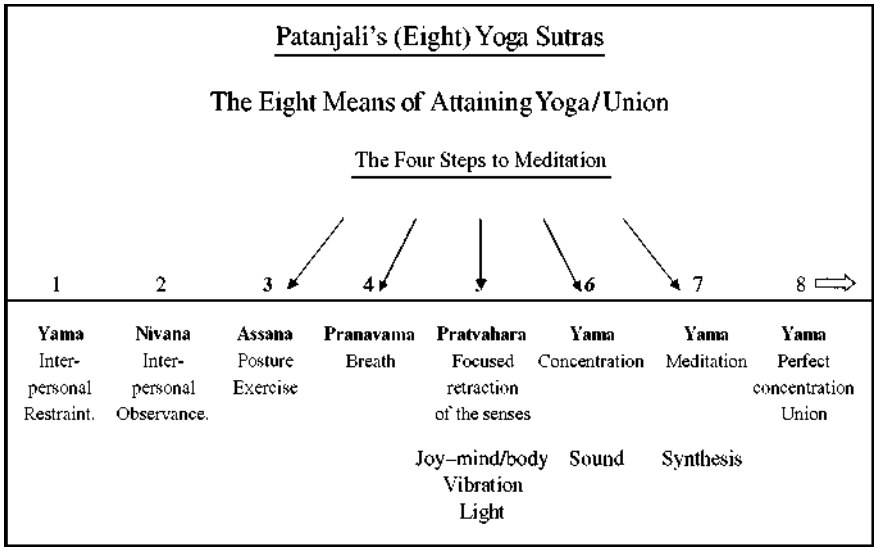

Figure 5 Patanjali's (eight) Yoga Sutras.

Since that time many studies have shown that self-regulatory techniques improve cardiovascular function and decrease the risk of disease. The changes that correlate with regular practice of these techniques include improvement in all of the following: heart rate, systolic and diastolic blood pressure, sympathetic tone, oxygen consumption, premature ventricular contractions, and postoperative arrhythmias (Benson, 1987). Improvement has also been demonstrated in heart rate variability, parasympathetic tone and responsiveness, and lipid profiles. Self-regulatory techniques have proved beneficial for the respiratory system, improving respiration rate, vital capacity, minute ventilation, and the frequency and severity of asthmatic symptoms. From a metabolic standpoint self-regulatory techniques help down-regulate the HPA axis, decreasing glucocorticoid and catecholamine levels. This in turn enhances anabolic activity, increasing growth, repair, energy storage, and immune function. The nervous system, which may be initiating many of these changes, appears to respond to these techniques with a marked change in the relationship between the sympathetic and parasympathetic branches of the autonomic nervous system. Recent work on heart rate variability has demonstrated that self-regulatory techniques increase parasympathetic tone while at the same time allowing more flexibly within the ANS to better meet the environmental demands of the moment (McCraty ***et ai,*** 1998; Tiller ***et ah,*** 1996).

II. RELEVANCE OF MEDITATION AND SELF-REGULATORY TECHNIQUES TO MENTAL HEALTH

Meditation and self-regulatory techniques have been used to attain and maintain mental and physical well-being for thousands of years in cultures around the world. These techniques should not be seen as something to be used only during stress, dis-ease, or disease but as a way to reach and maintain optimal function.

Meditation has been shown to be an effective adjunctive if not a primary mode of treatment in a wide array of psychiatric illness. It is now clear that the resultant elevations of glucocorticoids from chronic stress have a detrimental cytotoxic effect on the neurons in the hippocampus. It is even postulated that this effect is strong enough to cause cell death or limit potential neurogenesis in this area (Sapolsky, 2000). There is clear evidence that self-regulatory techniques can markedly decrease the negative effects of the chronic stress reaction. It is well known that a wide variety of psychiatric disorders are exacerbated by stress. A partial list of these disorders includes schizophrenia, major depression, dysthymia, bipolar disorder, attention deficit disorder, Tourette's disorder, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, anorexia, and bulimia. It is for these reasons that self-regulatory techniques should be viewed as a modality for the prevention and treatment of psychiatric disorders.

Self-regulatory techniques have been shown to be effective in the treatment of psychosomatic illness (Hellman *et al,* 1990), pain disorders (Kabat-Zinn *et al,* 1986), post-traumatic stress disorder, attention deficit disorder, substance abuse, anxiety disorders (Miller *et al,* 1995), and obsessive-compulsive disorder (Shannahoff-Khalsa, 1997). In recent years, improvement in melancholic depression and dysthymia has been demonstrated with yogic meditative techniques alone (Janakiramaiah *et al,* 2000). The finding that meditation can help improve depressive disorders should not be surprising given the recent evidence that depression also responds to vagal nerve stimulation. After all, meditation is a self-induced biofeedback mechanism with which we can stimulate the parasympathetic nervous system.

Self-regulatory and meditative techniques can and should be used throughout the life span. There is increasing evidence that self-regulatory techniques can help with the behavioral problems of children (Platania-Solazzo *et al,* 1992; Tellis *et al,* 1997). It has been shown that chronic or early environmental exposure to stress in genetically vulnerable individuals can lead to changes in structure, function, chemistry, and gene expression in the neurons within the CNS (Anisman *et al,* 1998). Decreased heart rate variability has been correlated with temperament and behavioral difficulties in children

(Calkins, 1997; Mezzacappa ***et*** *al.,* 1997; Pine ***et*** *al.,* 1998; Porges *et al.,* 1996). Self-regulatory techniques are an excellent intervention to help these children gain better control over their anxiety, fear, anger, and reactivity. Ideally children would learn self-regulatory techniques in school, alongside reading and writing. The basic elements of these techniques could be taught and reinforced throughout the school years.

III. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

Self-regulatory techniques and meditation get high marks for safety, risk factors, and compatibility with conventional medical and psychiatric care. There are few conditions in which self-regulatory techniques are contraindicated. If a clinician chooses to use a self-regulatory technique as a treatment, he or she should be careful to assess, discuss, and document the benefit and risk of such treatment, monitoring the effects closely.

There are some psychiatric conditions for which meditation could cause a decrement in function. These conditions include psychotic states such as those seen in severe mood disorders, schizophrenia, or substance-induced states. Other conditions to be wary of when using these techniques include clinical situations where dissociation, depersonalization, or derealization may arise. In these situations the clinician needs to proceed cautiously. That said, these techniques can be useful for treating dysfunction of the autonomic nervous system, such as in trauma and abuse situations (Linehan, 1993).

Even without significant psychological difficulties, the practice of meditative techniques can, on rare occasions, pose difficulties on an interpersonal, intrapersonal, or transpersonal level. When difficulties arise, a crisis of anxiety, fear, dissociation, or depression may result. On occasion an individual can experience a "spiritual emergency" (Grof, 1989) when energies (such as Kundalini) either wanted, unwanted, or unexpected are unleashed in an individual (Krishna, 1971). In such situations a person may either appear or feel that he or she is psychotic. These situations are frequently diagnosed as brief reactive psychosis or mania. Increased understanding and awareness by psychiatrists may help differentiate these seemly rare although apparently real clinical situations. Depression, hopelessness, or anxiety to the point of an existential crisis can occur after one experiences increased spiritual insight. On the other hand, individuals or teachers who have some success with meditation can develop a grandiose and narcissistic view of their success with meditation or the fanfare and accoutrements that accompany some traditions. More often than not this is

an expression of a preexisting personality style and is an indication for psychotherapy or a different meditation teacher.

IV. RESEARCH

The research in the area of self-regulatory techniques, although broad, includes little research measuring one technique against another. As referenced throughout the chapter there is a wealth of data on the use of self-regulatory techniques from case reports, clinical trials, and randomized control trials for both physical and psychological disorders. The majority of the studies in this field have focused on transcendental meditation, the relaxation response, and more recently mindfulness meditation as the interventions. The biofeedback research has also contributed to the field. In recent years, different types of meditative practices such as Kundalini Yoga and forms of Kriya Yoga have been receiving greater attention from the research community.

The rest of this section focuses on heart rate variability (HRV), which is an emerging area of research in mental health that will likely prove increasingly relevant to psychology, psychiatry, and the understanding of the physiology of self-regulatory techniques (McCraty ***et al.,*** 1998). HRV is a measure of the autonomic nervous system (Porges, 1992). Although historically there have been varying opinions on the reliability of this and other measures of vagal tone, there is now a building consensus that HRV is a valid measure (Malik ***et al.,*** 1996). In this model, HRV is used to measure the relationship between the sympathetic and parasympathetic nervous systems, specifically the vagal efferent activity. Vagal tone and HRV are thought to be the main physiological mechanisms through which we regulate arousal and reactivity to stimulation. With regard to our reaction to stress, it is not the sympathetic tone but the vagal tone that appears to establish our level of stress vulnerability. Cardiac vagal tone is a measure of the influence of the parasympathetic nervous system (PSNS) on the rhythmic oscillations in heart rate (HR) at any point in time. These rhythmic oscillations in HR are due to the respiratory sinus arrhythmia (RSA). RSA is the rhythmic increase and decrease in HR associated with the phases of respiration. It is vagal output that increases in response to exhalation causing the HR to decrease; the reverse happens on inspiration. Decreased HRV corresponds to a decreased ability to respond to an ever-changing environment at a given point in time.

Poor HRV has been associated with a limited ability for sustained attention (Suess ***et al,*** 1994), decreased trophotropic (growth) functions, increased sympathetic tone, increased cardiac reactivity, increased risk of hypertension,

autonomic neuropathy, congestive heart failure, arrhythmias, sudden death after a myocardial infarction, decreased resiliency to acute and chronic stressors, increased risk of mood and anxiety disorders, and increased risk of immune dysregulation (Malik *et al.,* 1996; Stys & Stys, 1998). Using self-regulatory techniques to improve HRV may prove to be a measurable and effective adjunctive treatment for stress-related disorders in both the physical and psychological realms.

V. TREATMENT

A clinician considering using these techniques for the first time could begin with a mild to moderate anxiety or adjustment disorder. After an initial evaluation is complete, the clinician would consider whether self-regulatory techniques are indicated, rule out any contraindications and consider whether the patient is a good fit for these techniques. The clinician considering this treatment might also want to ask about the patient's belief systems and religious affiliation. This discussion should lead into the traditional procedures, alternatives, risks, and questions (PAR-Q) conference and subsequent discussion of the treatment plan. Additional considerations at this time would be whether to proceed with a further work up, other adjunctive treatments, or consultations. From this point on, treatment would be no different than usual. These techniques can be taught as part of an office visit. When indicated, these techniques can be excellent complements (Kutz *et al.,* 1985) to dynamic and cognitive behavioral therapy. It is often helpful for a patient to undergo some education with regard to the anatomy and physiology surrounding acute and chronic stress reactions and how this compares with the relaxation response. Clinicians who are unfamiliar with these mechanisms may want to read a physiology or psychology textbook. General physicians are strongly encouraged to learn a simple self-regulatory technique, such as the relaxation response popularized by Herbert Benson, MD, and to teach it to their patients. With practice this can be done in 5-7 minutes and will contribute to improved health and well-being in the doctor and patient, as well as improve the doctor-patient relationship. The health care environment would markedly improve if all clinicians were using these techniques when indicted. In 1974 Herbert Benson wrote in the journal *Psychiatry,* "Physicians should be knowledgeable of the physiologic changes and possible health benefits of the relaxation response" (Benson & Beary, 1974). More than a quarter of a century later, we should not only be knowledgeable about these techniques but using and teaching them as well.

Once a treatment plan is established, it is time for the patient and the clinician to review the technique in detail. The clinician should describe the effects and side effects and what is expected from the patient with regard to compliance. Ideally, a patient should practice these techniques two times a day for 15 minutes. These techniques have proven to be particularly effective in group settings. The course and duration of treatment will vary based on the severity, chronicity, and treatment response of the disorder.

This author has been using self-regulatory techniques in clinical settings routinely for 15 years. An excellent example of the success of self-regulatory techniques is illustrated in the following case. Ms. Smith is a 42-year-old married woman with three school-age children. She was referred from the emergency room for a psychiatric evaluation. Ms. Smith had multiple emergency room visits due to shortness of breath, chest pain, and fears that she was going to die. She had not left the town she lives in for a number of years. After a thorough evaluation and review of the medical records, a diagnosis of panic disorder with agoraphobia was made. Ms. Smith chose treatment with medication and declined adjunctive psychotherapy. This began a series of what Ms. Smith believed were medication-induced panic attacks that occurred with doses as small as 12.5 milligrams of Zoloft. It was only with extensive amounts of supportive therapy that Ms. Smith agreed to a self-regulatory technique in conjunction with Prozac given at a dose of 0.25 milligrams a day. Within l week of using a basic abdominal breathing technique twice a day, there was a significant reduction in symptoms. Despite the remission of the panic attacks, there remained ruminating fears regarding general health as well as some agoraphobia. With the panic attacks under control, the Prozac was titrated over **3-4** months to a dose of 10 milligrams a day at which point all symptoms remitted. The initial breathing techniques developed into a regular meditation and exercise program. Prozac was stopped one year later with no recurrence of symptoms.

VI. TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

A number of programs have been designed for professionals who want training in self-regulatory techniques (see Section VII). To become a competent provider, a clinician should have appropriate training and be an experienced successful practitioner of a self-regulatory technique. Most medical or mental health professionals who practice a self-regulatory technique and have completed a clinical training at a program should be

competent. The next section provides a list of resources with regard to training and providers.

VII. RESOURCES

The Mind/Body Institute, 110 Francis Street, Boston, MA 02215. www.rnindbody.harvard.edu.Programs, professional training, and referrals.

The Center for Mindfulness in Medicine, University Massachusetts Medical School, 55 Lake Avenue North, Worcester, MA 01655. www.umassmed.edu.cfm.org. Programs, professional training, and referrals.

The Center for Mind-Body Medicine, 5225 Connecticut Avenue, NW, Washington, DC 20015. www.cmbm.org. Programs, professional training, and referrals.

Transcendental Meditation. Maharishi International University, Fairfield, IA 52556. www.tm.org. Programs, training, and referrals.

Mindfulness Based Stress Reduction. Web site and journal. www.mbsr.com.

Self-Realization Fellowship, 3880 San Rafael Avenue, Los Angeles, CA 90065. Kriya Yoga instruction as passed down by Parmahansa Yogananda.

Kriya Yoga Institute, P.O. Box 9246 15, Homestead, FL 33092-4615. www.kriya.org. Kriya Yoga instruction by Parmahansa Hariharianandа, disciple of Sri Yukteswar.

The following books are excellent introductions for patients and professionals alike.

Benson, H. (1987). *Your maximum mind.* New York: Random House.
Borysenko, J. (1987). *Minding the body, mending the mind.* New York: Bantam Books.
Hendricks, G. (1995). *Conscious breathing.* New York: Bantam Books.
Kabat-Zinn, J. (1991). *Full catastrophe living.* New York: Delacorte.

The following books are useful for professionals or practitioners of self-regulatory techniques.

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Goleman, D. (1988). *The meditative mind. Los* Angeles: Jeremy P. Tarcher.
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Chapter 9

Qigong

James Lake, MD

I. OVERVIEW

A. INTRODUCTION AND HISTORICAL BACKGROUND

Many aspects of qigong practice have been examined scientifically; however, qigong is essentially a spiritual practice based on metaphysical assumptions

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about the energetic nature of the human body. In contrast to Western medicine, which assumes that the universe is reducible to physical objects and processes, Chinese medicine assumes that irreducible energetic "essences" constitute all reality, including the human body, and that the balance between these energies determines health or illness. Therefore, according to Chinese medical theory, it naturally follows that a sound mind and a healthy body are interdependent on each other.

The precise origins of qigong are lost to history, but it is known that healing forms like qigong were widely practiced in China as early as 2000 BCE and likely evolved from introduced yoga or Tibetan Buddhist practices (Jwing-Ming, 1989, chap. 2). The historical and philosophical roots of qigong are also the roots of acupuncture and herbal medicine and are therefore inseparable from basic principles of Chinese medicine in general. However, the empirical knowledge that led to the development of acupuncture and herbal medicine is historically much more recent. The term *qigong* was not used in its present meaning until early in the twentieth century (Cohen, 1997, chap. 2). Currently, qigong practice plays a central role in Chinese culture where it is estimated that 100 million people practice various forms of qigong daily with the intention of promoting health and preventing or treating illness. Two basic kinds of qigong are practiced: *active* and *passive.* Active qigong is intensely physical, although an individual engaged in passive qigong appears to be meditating. Literally hundreds of styles of qigong have evolved for different applications of disease prevention or health promotion. Different formalized styles use various combinations of elaborate physical movements, breathing exercises, or directed intention to regulate the flow of qi for an optimum balancing of yin and yang energy with respect to a specific condition.

During the past few decades, starting soon after the end of the Cultural Revolution, qigong has become increasingly popular in North America and Western Europe. However, many practitioners of Chinese medicine place qigong in a separate category and typically do not use this technique in conjunction with other approaches in Chinese medicine. This may be due to the absence of an associated qigong "technology" in contrast to exact protocols for acupuncture treatment or the preparation of herbal formulas, leading to a perception among many Chinese medical practitioners that qigong is not susceptible to rigorous empirical verification. Some writers have argued that the healer-patient relationship is similar in qigong and shamanic healing practices and that suggestibility or shared cultural beliefs significantly determine the effectiveness of qigong as a traditional form of healing (Kleinman, 1979). However, recent research findings reviewed in Section IV offer compelling evidence that suggestibility *does not sufficiently explain* observed effects of qigong.

B. AN OVERVIEW OF CHINESE MEDICAL QIGONG THEORY

According to Chinese medical theory, qi is one of three fundamental kinds of energy that are the basis of health and healing. The other two, shen (spiritual energy) and jing (sexual energy), are considered the yang (ascending, bright, active, etc.) and yin (descending, dark, passive, etc.) aspects of qi, respectively. More abstractly, jing, qi, and shen can be translated as body, mind, and spirit, respectively. Chinese medical theory posits that qi derives from three basic sources: food, breath, and the body's genetic constitution. Food and breath combine to form the "nutritive qi," which is the kind of qi that is believed to flow through the meridians and is altered or manipulated during acupuncture treatments. In contrast, the inherited constitution of the physical body is called "original qi." Jing has been translated numerous ways, but is perhaps most accurately rendered as "essence," or "the original source of life and growth" (Jwing-Ming, 1989, chap. 3). There are many kinds of jing energy, but yuan jing or "original essence," which comes from the parents and generates new life, is most important. This original essence is the source of both qi and shen.

Like the other areas of Chinese medicine, qigong is carried out with the goal of restoring optimum balance between yin and yang elements of the biological, spiritual, and energetic aspects of the body. These have been called the "three treasures" or "three foundations" in classic texts of Chinese medicine. Three basic stages are involved in the development of one's capacity or skill to build up or manipulate and transform qi:

1. Converting jing into qi (or "nourishing the jing")
2. Converting qi into shen (or "nourishing the shen")
3. Refining the shen to govern one's emotions (or "refining the shen")

The processes of building up, strengthening, or propelling qi energy to different regions of the body and transforming the various types of energy into others are believed to originate in the three dan tien (literally, "fields of the elixir"), which are regarded as the three principle storage sites of jing, qi, and shen. Specific qigong exercises are directed at strengthening one or more of the three foundations or facilitating conversion of one energetic principle into another in cases where a deficiency or relative imbalance has been identified (Cohen, 1997, p. 35). When these exercises are correctly done, typically under the guidance of a qigong master, the "three treasures" remain in an optimized state of balance. Optimum energetic balance manifests as prolonged good health including a calm, centered state of mind. Individuals who have reached this place of strengthened energy and optimum energetic balance may develop the capacity to affect the energetic balance of other people

or objects through touch or intention only. Both self-directed and outwardly directed "emission" qigong constitute medical qigong-the deliberate manipulation of qi to prevent or treat illness.

Just as the body is conceptualized as the interaction of subtle energies and matter, health and disease are likewise regarded as manifestations of the relative strength, state of balance, or state of imbalance between these presumed energies and complex biological structures and physiological processes. According to the theory, an external field of "protective energy," or ***wei*** qi, emanates from all living things. Internal stresses (including psychological traits and strong emotions) and external "stresses" or "pathogenic" factors (including disease-causing organisms or toxic substances) can damage this protective field, eventually resulting in illness if not corrected. Disruption of the wei qi may predispose the individual to retaining "toxic energy" or experiencing "depletion" of desirable energy, manifesting as physical, emotional, or psychosomatic illness. Emotional stress and neglect of one's physical health typically result in diminished qi. Qigong is effective in "healing" when self-directed qigong practice or emission qigong treatment by a qigong doctor replenishes or rebalances qi energetic patterns, thereby restoring the wei qi. Numerous theories have attempted to explain what qi is and how it is effective in maintaining health or healing disease. The principle theories, and evidence for these, are reviewed in Section IV.

Many claims have been made about the efficacy of qigong as a treatment of medical disorders, including breast cancer and other malignancies; disorders of the kidneys, lungs, and liver; and as a treatment of tremor or other symptoms of Parkinson's disease and certain other neurologic and psychiatric disorders. Recent studies have examined the potential of qigong to accelerate return to normalized neurologic functioning following a stroke (Weintraub, 2001) or to reverse generalized cerebral atrophy (Zhao *etal.,* 1988). Formalized treatment protocols based on cumulative clinical experience, prospective trials, and limited double-blind studies have been developed for specific medical and psychiatric disorders.

II. RELEVANCE OF QIGONG TO MENTAL HEALTH

Numerous studies have demonstrated that consistent qigong practice has a sustained positive influence on many common psychiatric disorders. Section IV reviews significant research on possible mechanisms underlying effects of medical qigong. Treatment protocols for common psychiatric disorders are discussed in Section V. According to Chinese medical theory, imbalances of qi, shen, or jing can be manifested as physical, emotional, or

psychosomatic illnesses. Recall that shen is the yang aspect of qi energy, in contrast to jing, or sexual energy, which is the yin aspect of qi. Most psychiatric symptoms, including psychosis, anxiety and depression, are believed to result from "deviations" in shen energy, which is often identified as the inherent "force" of the nervous system. The yuan shen represents the innate or "inherited" spiritual pattern of the individual and his or her connection to the divine energy of the universe. In contrast, the zhi shen corresponds to beneficial or toxic thought patterns acquired following birth. The yuan shen is believed to reside in the brain, while the zhi shen resides in the heart. In the natural state, the yuan shen (mind) rules over the zhi shen (heart), and imbalances or distortions of yuan shen and zhi shen manifest as various psychological or emotional symptoms. It follows that the task of the qigong master or self-directed qigong practice is to correct imbalances through appropriate passive or active qigong exercises.

Failure to resolve intense emotions is believed to cause blockage of optimum qi circulation, resulting in relative deficiency of qi or accumulation of "toxic energy" in certain anatomical regions or physiological functions of the body, ultimately manifesting as emotional or psychosomatic symptoms. Treatment of symptoms related to "toxic energy" has the goal of releasing excess qi or strengthening deficient qi. Qigong practitioners and individuals who receive "emission" qigong treatments claim to experience "release" of emotional tension and a state of mental "quiet." These changes are typically interpreted as evidence that circulation of qi has normalized. It is generally believed that longer practice corresponds to relatively better physical and mental health through improved energetic "balance." Individuals who practice qigong consistently often experience a state of peacefulness or emotional repose that translates into resilience and improved capacity to cope with stress.

An indirect benefit of qigong for mental health is enhanced awareness of the body, including somatic symptoms that may signal emotional distress. For example, improved awareness of muscle tightness in certain body regions gained through qigong practice may give the practitioner insight into a stressful situation or an emotional conflict that is related to that somatic symptom. Improved awareness gives the individual the choice of changing circumstances to alleviate stress or exploring an emotional conflict that may underlie his or her distress or psychosomatic symptoms. In this way, qigong practice is a useful adjunct to psychotherapy, with the important distinction that qigong avoids conscious processing of dynamic issues while striving to optimize circulation of the qi. It is interesting that numerous studies on psychiatric disorders in China (Kleinman, 1980) have consistently found a high rate of somatization associated with depression and anxiety, in contrast to

Western cultures where individuals tend to focus on emotional distress. Chinese medicine does not make a basic distinction between psychiatric and medical disorders, perhaps in part because of the common occurrence of somatic symptoms in depression or anxiety reported in Chinese culture. The popular term used in contemporary Chinese medicine to describe many psychosomatic symptom patterns in this category is *neurasthenia.*

III. SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

A. No ABSOLUTE BUT MANY RELATIVE CONTRAINDICATIONS

Hundreds of studies have been conducted on the efficacy of qigong for a range of medical and psychiatric disorders. However, no studies assessing long-term safety or contraindications have been done. Anecdotal comments appear in the translated medical literature on issues of safety, including possible contraindications against qigong practice or emission qigong treatment in individuals with certain medical or psychiatric disorders. A thorough review of the medical literature from both English and Chinese language sources revealed no findings pointing to *absolute* contraindications of qigong practice or external qigong treatment in patients who have specific medical disorders or who are taking medications or receiving other conventional or alternative treatments. The absence of reported severe adverse outcomes or contraindications is consistent with the hypothesis that qigong mediates therapeutic effects at the level of "subtle" energetic processes associated with physiological or psychological functioning and therefore can not potentially cause gross biological or *energetic* disturbances in healthy functioning.

In his seminal book, *The Way of Qigong,* Cohen (Cohen, 1997, chap. 17) discussed medical conditions that he considered to be *relative* contraindications to the practice of specific internal qigong exercises by individuals. These include:

- Avoidance of strenuous qigong exercises during pregnancy, menstruation, or when there is arthritis
- Avoidance of qigong practices resulting in increased "heat" when there is a preexisting inflammatory or infectious condition
- Avoidance of passive qigong exercises where hemorrhoids, varicose veins, or chronic pain are issues
- Avoidance of slow abdominal breathing where there is diabetes or kidney failure

In addition, Cohen advised against practicing qigong soon after eating, outside during inclement weather, or in the presence of unresolving chronic pain. In his comprehensive treatise on Chinese medical qigong (Johnson, 2000, chap. 28), Johnson discusses guidelines and warnings for the medical qigong doctor who treats individuals by *emitting* qi. Johnson advises the qigong doctor to avoid energetic depletion and prevent invasion of *turbid* qi from the patient through a consistent health-promoting regimen of diet, rest, meditation, and the skillful practice of qigong. Both Cohen and Johnson comment on transient symptoms that are often reported during the first few months of qigong practice, including itching, swaying, "clicking" in the joints, perspiration, generalized muscle soreness, drowsiness, or restlessness (Cohen, 1997, p. 273). Some individuals report nausea, dizziness, tremors, and headaches (Cohen, 1997, p. 274). Pathological physical or emotional symptoms resulting from unskillful qigong practice are called "qi deviations." According to Johnson (Johnson, 2000, p. 377), four basic kinds of qi deviations can occur as a result of unskillful practice: a weak constitution, deviations in posture or respiration, disbelief and suspiciousness, and excessive thinking.

B. PSYCHIATRIC SYMPTOMS RESULTING FROM "ERRONEOUS" QIGONG

One significant safety concern has been described in the Chinese and Western medical literature, namely, that transient psychosis, including auditory hallucinations, or other psychiatric symptoms may result from the "erroneous" practice of qigong (Flaws & Lake, Book III, chap. 12). Chinese medical theory holds that psychological or psychosomatic symptoms originate when inappropriate qigong exercises are practiced with respect to a specific problem or when qigong is practiced *excessively* or otherwise *unskillfully.* Both cases would be construed as "erroneous[7]' practice of qigong. The Chinese Classification of Mental Disorders (CCMD-2) describes several psychological disturbances that are regarded as undesirable outcomes of "erroneous qigong." A similar diagnostic category exists in the current edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Several discrete symptom patterns that are frequently associated with "erroneous" qigong according to the CCMD-2, resemble Western psychiatric disorders that are formulated in the DSM-IV. These include hystrionic personality disorder; conversion disorder; somatoform disorder; schizophrenia, and other psychotic disorders. According to the DSM, psychotic symptoms associated with the *erroneous* practice of qigong are regarded as a kind

of culture-bound syndrome, "qigong psychotic reaction." To date, few efforts in Western medicine have explored various hypotheses that psychiatric or psychosomatic symptoms resulting from "erroneous qigong" may actually be *caused by* direct or indirect pathological effects of **qi** deviations on various aspects of cognitive and emotional functioning.

C. QIGONG PRACTICE CAN EXACERBATE PREEXISTING PSYCHIATRIC DISORDERS

Psychotic syndromes or other serious psychiatric disorders that occur before the start of qigong practice obviously exclude qigong as a primary cause. However, erroneous qigong practice sometimes results in brief exacerbations of chronic recurring psychiatric illnesses. When psychotic symptoms occur transiently following qigong practice, the most likely Western psychiatric diagnosis is brief psychotic disorder. Conversely, in cases where psychotic symptoms occur in individuals who *believe* that **qi** is a fundamental kind of energy, the episode will likely be viewed as *qigong psychotic reaction,* a culture-bound syndrome. Various nonpsychotic psychiatric disorders have also been reported following erroneous qigong. The Chinese medical literature describes numerous syndromes that are similar to hysteria as defined in Western psychiatry. These syndromes are often characterized by inappropriate laughing and crying, and unusual movements that sometimes mimic convulsions, weakness, and aphasia. This symptom pattern resembles conversion disorder as defined in contemporary Western psychiatry. Further, individuals with histrionic personality disorder often display exaggerated emotions, are highly suggestible, and frequently demand attention. During or following qigong practice, for example, histrionic individuals might display exaggerated *apparent effects* of qigong in an effort to seek attention. These individuals often distort or exaggerate bodily sensations, claiming unusual somatic sensations that have previously been documented to occur during qigong practice or emission qigong treatment. Individuals who have borderline personality disorder may experience dissociative or psychotic symptoms and self-injurious or suicidal impulses when experiencing intense emotions that may accompany certain qigong exercises. In general, it is likely that newly emergent psychiatric symptoms following *erroneous* qigong will occur more often in individuals with personality disorders because these individuals often have a disturbed capacity for emotional self-regulation that makes them susceptible to psychiatric symptom formation following qigong exercises or other mind-body practices often associated with intense emotions. Based on this discussion, individuals who have psychotic disorders or certain personal-

ity disorders should probably be advised to avoid qigong practice and not receive emission qigong treatment.

IV. RESEARCH

A. MANY THEORIES HAVE BEEN ADVANCED

Qigong has been extensively studied in prospective trials and controlled experiments employing contemporary scientific standards in both China and Western countries. Numerous explanatory theories have been advanced for a "mechanism" inherent in qi or the practice of qigong that results in improved health or prevention of illness. Several studies suggest a direct or indirect effect on brain electrical activity or regional cerebral blood flow that may be associated with desirable therapeutic effects of qigong. Indirect health benefits of increased blood flow (Machi, 1993) include enhanced oxygenation, increased delivery of nutrients to tissues, and more efficient removal of cellular metabolic waste. Generally improved mental functioning is believed to take place when these effects occur in the brain (Omura, 1992). Many studies suggest endocrinologic or immunologic effects that may mediate beneficial medical or psychiatric influences of qigong. Numerous studies have attempted to measure energy or "information" associated with the practice of qigong or emission qigong therapy. Several experiments have demonstrated consistent changes in physiological parameters in individuals practicing qigong or undergoing emission qigong treatment, including galvanic skin resistance (GSR), EEG, blood levels of certain neurotransmitters (or their metabolites), and cellular immunologic functioning.

In spite of widespread skepticism among Western medical practitioners, numerous studies have identified apparent correlations between qi and various measurable aspects of currently understood forms of energy, including intensity, frequency, and wavelength of sound, heat, light, and electromagnetic fields, respectively. Using a superconducting magnetometer, researchers measured magnetic fields between the hands of qigong healers as high as one milligaus or roughly 1000 times stronger than the magnetic field generated by the beating heart (Lee, 1997, p. 13). Although a mechanism has not been verified, some researchers have suggested that according to quantum mechanics theory, complex biochemical structures, including DNA molecules, might be capable of generating and detecting weak but highly coherent magnetic fields (Lee, 1997, p. 13). To date, the reported size of this effect has not been replicated in other experiments. Speculation about the nature of interactions between intentionally generated "subtle energy fields"

and biological systems resulting in "healing" is the domain of "energy medicine" (Oschman, 2000).

B. QIGONG **MACHINES IN THE TREATMENT OF PSYCHIATRIC DISORDERS**

Recent experiments employing machines that attempt to "simulate" qigong using various kinds of generated energy fields contribute to the scientific discussion of the physical nature of qi and help clarify possible underlying mechanisms of qigong in healing. Numerous experiments have permitted researchers to separate the element of human consciousness or directed intentionality from machine-generated energy fields that are presumed to be ***like*** human-generated energy fields resulting in the observed therapeutic effects of qigong. Most Chinese studies that explore machine-generated "simulations" of qigong are summarized in a brief publication by Richard Lee (1997), founder of China Healthways Institute. During several trips to China, Lee learned of government-sponsored research programs established with the goal of identifying the physical basis of qigong and building machines capable of "generating" qi energy for use in the treatment or prevention of disease. Beginning in the early 1980s, numerous studies conducted at many prestigious research institutes, including the National Atomic Energy Laboratory in Shanghai and the Space Science and National Electro-Acoustics Institute in Beijing, have replicated findings of low-frequency high-decibel sound, electromagnetic, or light energy emitted from qigong masters as they treat patients. These findings have led to speculation about a primary effect of directed consciousness, subaudible sound waves, weak superconducting magnetic fields, and numerous ideas stemming from quantum mechanics as possible explanations of healing in qigong. To date, three kinds of machines have been designed and built in efforts to simulate emitted qi based on electromagnetic fields, infrared energy (heat), and very low frequency (VLF) sound waves detected from qigong masters. Most studies summarized in Lee's book pointed to intriguing possibilities that must presently be viewed as compelling but inconclusive hypotheses because of few replicated methodologically rigorous experiments. The claim that qigong machines generate an ***energy*** field that is equivalent to qi emitted from a qigong master is highly controversial among most qigong practitioners who believe that emitted qi cannot be replicated by a machine (personal communication, Ken Sancier).

The problem of verifying that qi exists stems from basic differences in research style between Chinese- and Western-trained scientists. As noted earlier, numerous conceptual and methodological problems limit controlled

studies of qigong and other "energetic" healing techniques, which posit the existence of phenomena that may not be explainable or measurable by contemporary Western science (Cohen, 1997, Appendix C). Finally, many Chinese researchers accept as factual that qigong practice generates a fundamental kind of energy, and therefore do not undertake elaborate controlled precautions when designing experiments intended to characterize qigong, but not necessarily to verify a phenomenon that is considered indisputable. At this point, there is no clearly established scientific theory explaining energetic or healing phenomena associated with qi or the practice of qigong, including what qi is, how qi is "generated," or how qi interacts with living or nonliving objects. Table I summarizes interesting findings that point to different possible mechanisms of qigong in healing.

C. SOME LIMITATIONS OF SCIENTIFIC STUDIES OF QIGONG

Experimental designs pertaining to qigong are inherently limited by the fact that qigong as presently conceptualized is not susceptible to quantification and therefore cannot be "dosed" in a manner that is comparable to most allopathic medical therapies. Therefore, repetitive research protocols based on qigong self-treatment or emission therapy are not possible. This basic difference between qigong and allopathic treatments suggests that applying certain Western research standards to studies on qigong represents a category mistake. These issues are discussed elsewhere (Cohen, 1997), and must be kept in mind to ensure that research protocols and findings of studies on medical qigong are rigorously and fairly reviewed with respect to methodological limits inherent in research pertaining to qigong. Another obstacle to good research is the inherent difficulty in designing double-blind studies on emission qigong therapy. Because the effects of qigong are subtle, "sham" qigong masters and true masters may appear identical to even critical observers. This fact has led to the requirement of double-blind studies of emission qigong in which no overt differences between sham and actual qigong masters are evident to careful observers or test subjects.

D. A COMMENT ON SELECTION BIAS

Before discussing findings of several experiments in detail, it is important to make a distinction between studies of qigong practitioners and individuals who do not practice qigong but who receive emission qigong treatment. Conclusions based on data from studies of qigong practitioners,

Table I
Possible Mechanisms Underlying Qigong in Healing

- An interpretation of the reported efficacy of medical qigong that does not rest on assumptions about the role of "subtle" energies in healing is that qigong practice is simply a specialized kind of meditation practice that is associated with EEG changes corresponding to deep relaxation and improved mental clarity. Along these lines, it is reasonable to expect that many psychological or psychosomatic symptoms being "treated" by qigong would be diminished or eliminated through consistent qigong practice. However, this model cannot potentially explain observed positive changes in health resulting from external qigong treatment or use of a qi-generating machine, in which individuals randomly assigned to receive qigong treatment are presumably not biased toward expectations of positive outcomes or in a meditative state.
- Qigong, like acupuncture and Chinese medical message (tui na) "rebalances" qi by sending infrasonic vibrational energy into the meridians (Lee, 1997, p. 22), which somehow indirectly affects immunologic or autonomic functioning resulting in improved health.
- Qigong meditation, external qigong, and simulated (machine-generated) qigong all have similar therapeutic effects on the brain's alpha rhythm, including increased alpha power spectrum in all EEG channels, enhanced synchronization of alpha between different brain regions, and shifting of EEG pattern to a dominant alpha frequency in the frontal cortex (Lee, 1997, p. 16). In effect, when being treated by a qigong master, during qigong practice or machine-generated qigong, much of the cerebral cortex is inhibited, while autonomic activity in the brainstem is relatively increased. **A** possible indirect mechanism of healing in qigong is therefore optimization of autonomic functioning resulting in improved "balance" and "integration" of sympathetic and parasympathetic functions in the various organ systems innervated by the autonomic nervous system. This hypothesis naturally extends to a discussion of psychoneuroimmunology, which has demonstrated a close link between autonomic functioning, stress, and immunologic status, indirectly affecting emotional and physical health.
- There is evidence that highly organized microscopic biochemical structures, including possibly DNA molecules and ultrastructural constituents of axons in the central nervous system (Penrose, 1994), are capable of generating weak coherent magnetic fields that might "interact" with similar biomagnetic fields in other organisms, imparting "information" that results in subtle changes in autonomic functioning manifesting as improved energetic balance and "health."

which constitute the majority of studies reviewed in this section, are subject to different kinds of error and inherently greater ambiguity than conclusions forthcoming from controlled studies of populations receiving emission qigong treatment from a qigong master or a qigong machine. This difference is important because it implies that results from studies on qigong practitioners cannot be generalized to studies on the efficacy of emission qigong therapy or qi-generating machines. This is due to the fact that individuals who are motivated to practice qigong in a consistent, con-

tinuous fashion will likely also engage in numerous other health-promoting or disease-preventing behaviors as a reflection of shared values or beliefs that probably motivate them to practice qigong. It is therefore reasonable to infer that qigong practitioners assigned to "experimental" groups probably constitute a self-selected population characterized by numerous uncontrolled variables that contribute to improved physical and mental health in complex and subtle ways. This point is significant because the inseparability of confounding health-promoting factors among qigong practitioners tends to obscure the efficacy of qigong as a specific intervention targeting specific disorders. In contrast, individuals who do not practice qigong but are randomly assigned to the experimental group receiving emission qigong treatment or to the control group receiving sham qigong treatment do not constitute a self-selected group, and there is no reason to expect that they will share values or beliefs that would result in other health-promoting behaviors resulting in skewed outcomes.

E. QIGONG **RESEARCH ON THE** CNS **AND PSYCHIATRIC DISORDERS**

The Qigong Database™ is continuously updated by Ken Sancier, PhD, founder and director of the Qigong Research Institute. The Qigong Database™ contains more than 1600 abstracts of papers from international conferences or scientific journals pertaining to all theoretical and clinical aspects of qigong. It is important to note that complete papers were not available for review by the author. Therefore, ratings of study designs and the significance of results are estimates of research quality based on limited information contained in the abstracts reviewed in this section. To identify all studies relevant to qigong in the treatment of common psychiatric disorders, keyword searches were done on "anxiety," "depression," "attention deficit disorder," "chemical dependency," "mental health," "psychology," and "emotions."

1. Effects of Qigong on the Central Nervous System

In a study presented at the Second International Conference on Qigong in 1989 (Tang & Sun, 1989), researchers described consistent increases in urinary catecholamines (both adrenaline and noradrenaline) in 11 subjects practicing two specific forms of qigong, da yan gong and lao zi quan zhen gong. **A** correlation was found between total duration of qigong practice and relative increase in urinary catecholamines. These findings were interpreted as

supportive of the hypothesis that certain kinds of qigong practice result in increased sympathetic activity associated with increased excretion of catecholeamines from the adrenal medulla. A theoretical mechanism linking qigong practice to increased sympathetic activity was not discussed. One possible explanation points to a primary "arousing" or "activating" effect of qigong in the central nervous system, indirectly leading to increased sympathetic discharge stimulating adrenal catecholeamine excretion. Along the same lines, a study presented at the First International Congress of Qigong (Liu, 1990b) showed a consistent positive relationship between qigong meditation or emission qigong treatment and enhanced alpha EEG activity in the prefrontal association cortex. The study showed increased electrical activity in the brainstem and hypothalamus following qigong practice, and simultaneous ***inhibition*** of several areas of the cerebral cortex. The same researchers reported similar changes in anesthetized cats receiving emission qigong treatments, eliminating the possible role of suggestion. The authors detected infrasonic sound from qigong masters during emission qigong treatments and concluded that emitted qi was manifested as high-decibel sound energy that somehow caused observed changes in EEG in the cerebral cortex, brainstem, and other brain regions (see Lee, 1999, for discussion of related experiments using qigong machines). An explanatory mechanism for the observed effects was not proposed. Conclusions of this study are limited by the apparent absence of controlled conditions, no information about the size of the study group for human or animal trials, and the absence of blind raters. A study (Liu *et al,* 1999) that adds an interesting perspective to these findings compared brainstem and cortical evoked potentials before, during, and after qigong practice. Enhanced brainstem evoked responses were correlated with decreased cortical evoked responses during and following qigong. This finding may be consistent with a biological effect of qigong resulting in increased sympathetic activity (as noted later). A study (Manabu *et al,* 1996) conducted at the Cyclotron Radioisotope Center, Tohoku University School of Medicine, used three-dimensional positron emission tomography (PET) and EEG to study relationships between brain electrical activity and changes in regional cerebral blood flow (rCBF) in a qigong practitioner. Their findings included significant increases in (high-frequency) alpha and beta EEG domains and reduced (slow-frequency) delta activity following qigong. Enhanced beta activity in the frontal lobes following qigong practice was correlated with increased cerebral blood flow in the same region and relatively decreased regional blood flow in posterior brain regions. The significance of these findings is limited by the fact that a single subject was used, and there was no control case.

In addition to these studies, a case report of reversed cerebral atrophy through qigong practice bears reviewing (Zhao *et al,* 1998). The authors reported the remarkable finding of reversed cerebral atrophy in a 79-year-old

male who had previously been diagnosed with "cerebroatrophy" by CT scan. The patient had reportedly gradually lost his capacity to read and work, and complained of dizziness and "inert thinking" and was observed to have " stupid facial expressions." Significantly, there was no mention of depressed mood, and symptoms were not interpreted as psychosomatic complaints associated with a mood disorder. A pretreatment CT scan reportedly confirmed the presence of significant generalized cerebral atrophy consistent with dementia. After failing to respond to Western or Chinese medical acupuncture or herbal treatments, the patient was advised to follow a twice-daily routine of a specific meditative qigong practice, quan zhen gong. He also received an unspecified number of emission qigong treatments from one of the authors, reportedly with observable improvements in cognitive symptoms. After approximately *6* months of combined qigong practice and emission qigong treatments, the patient had returned to his previous cognitive baseline and was no longer assessed as demented. Following several more months of continued qigong practice but not emission qigong treatments, a repeat CT reportedly confirmed a reversal of the generalized cerebral atrophy identified in the initial scan. Independent replication of a claim of reversed cerebral atrophy by CT or MRI under controlled conditions using blind physician raters to assess pre- and post-treatment mental status would constitute a remarkable finding. Additional brain imaging studies are necessary to confirm reported effects of qigong practice or emission qigong treatment on EEG, regional cerebral blood flow, and cerebral atrophy to suggest *testable* mechanisms underlying these effects and, most important, to clarify possible correlations between these CNS effects of qigong and clinical improvements in psychiatric or medical disorders. It is important to note that in order to determine possible mechanisms or differences in mechanisms underlying qigong practice or emission qigong therapy, future rigorously controlled experiments should examine EEG, regional cerebral blood flow (rCBF), or structural brain effects in both treatment populations.

2. Effects of Qigong on Mental Health in General

Three papers discussed the influences of qigong practice on broad aspects of mental health. One of these was a discussion of medical qigong theory; the other two studies described promising general effects based on limited data. A study (Wang, 1990) presented at the Third International Symposium on Qigong summarized prospective data from an open trial examining "psychological effects" of chanmi qigong on several variables of mental performance and common psychological or emotional symptoms in 35 subjects who had practiced qigong for an unspecified period of time. The authors concluded that subjects who consistently practiced the chanmi style

of qigong experienced sustained improvements in mental performance, including enhanced "quickness and flexibility" in memory and attention tasks. Subjects also reportedly achieved improved "stability of emotion, mood, ability of self-control, temper, and logic of thinking." Instruments used to rate observed mental or emotional changes and the magnitude or statistical significance of observed improvements are not discussed in the abstract, which is given a rating of 3 for purposes of this chapter.

A study presented at the Fourth International Conference on Qigong (Hayashi, **1995)** described results of a survey of 226 Japanese who practiced qigong daily for an unspecified period. The authors concluded that the consistent practice of qigong resulted in improved "emotional stability, increased joy of life, decreased selfishness, more open attitude, increased interest, increased will power, and increased care about others." From these observations based on self-completed surveys, the author concluded that qigong practice "is suited for the treatment of mild depression, hysteria and neurosis" and warns against the practice of qigong in cases of "active schizophrenia," although comments later that "it is highly possible to achieve recovery from schizophrenia with careful qigong treatment." In the case of schizophrenia, the author presumably raises cautions similar to those discussed in Section III, but does not elaborate. Prospective data were not collected during this study, and there was no attempt to compare practitioners with nonpractitioners or to estimate the size or significance of a pre-post treatment effect of qigong practice on emotional symptoms. Because of these limitations, this study receives a rating of 2.

A third general paper on qigong in mental health, presented at the Third World Conference on Medical Qigong, discussed qigong as an adjunctive treatment to psychotherapy (Geibler, **1998).** The paper summarized numerous anecdotal observations of a psychotherapist who encouraged patients to practice the yangsheng style of qigong together with psychotherapy for preventive mental health care. The author made general claims of improved outcomes in the treatment of many common disorders, including neuroses, depression, anxiety, and psychosomatic disorders, when qigong is appropriately combined with psychotherapy. The author warned against the "unskillful" application of qigong in the treatment of severe mental illness, especially psychosis. This paper does not offer a hypothesis, describe research, or present numerical data supporting claims of efficacy and therefore receives a rating of 1.

3. Effects of Qigong on Psychiatric Disorders

a. Qigong in the Treatment of Depression

Three studies included in the qigong database examined qigong as a treatment of depression. Only one study (Tang **et al.,** 1990), presented at the

Third National Academy Conference on Qigong Science, yielded compelling double-blind evidence of efficacy. The principle goal of this study was to measure desirable psychological changes in an elderly population who practiced qigong consistently. One hundred twenty-two elderly qigong practitioners and 55 subjects who practiced taijiquan were compared to 90 age-matched subjects who had never practiced qigong or taijiquan. The results, which are not quantified in the abstract, showed improved mood, reduced anxiety, and "better quality of sleep" in the experimental group. The authors concluded that qigong was "useful to the improvement of neuroticism," but did not clearly define this term. Further, they observed that Type A behavior was moderated in patients who had practiced qigong at least 5 years. Rating instruments and the size or significance of results are not described in the abstract of this study, which receives a rating of 3 in view of promising data and the presence of a control group.

Two additional studies on qigong in depression yielded significant findings that require confirmation through future controlled experiments. A prospective open study presented at the Second World Conference and Academic Exchange on Medical Qigong (Wang, 1988) compared measures of numerous psychological variables in nonmatched populations who had practiced qigong for less than 2 years (N = 153) with individuals who had practiced qigong longer than 2 years (N = 119). Quantitative instruments not described in the abstract were used to derive mean pre-post treatment standard deviations (SD) of change in 10 psychological variables, including somatization, obsessive-compulsive tendencies, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, and others. Significantly greater improvement was found in the group that had practiced longer than 2 years for all measured indicators of emotional and psychological functioning, including depression and anxiety. Other important findings included significant reductions in severity of Type A behavior and psychosomatic symptoms. In general, improvements in baseline psychological and emotional state corresponded to the duration of qigong practice. This study receives a rating of 3 in view of promising prospective data, the presence of some controls, and significant trends requiring verification through future double-blind controlled studies. A third study (Schwartzman, 1998), presented at the Second World Congress of Qigong, examined the efficacy of qigong on overall quality of life, degree of neurologic impairment, and mood in 17 individuals diagnosed with Parkinson's disease. In this 10-week prospective open study, 13 patients self-reported improved mood but did not experience significant improvements in overall quality of life or motor performance. Moreover, 9 of the 13 patients reporting benefits from qigong practice experienced a 25-50% improvement from their pretreatment depressed baseline. The rating of this study, and the average rating for all reviewed studies on qigong as a treatment of depression, was 3.0, indicating

promising prospective data while calling for more controlled studies replicating these preliminary findings.

b. Qigong in the Treatment of Anxiety

In total, five studies examining qigong as a treatment of anxiety were identified. Only one study reported promising evidence of a therapeutic effect (Li *et al.,* 1988). This open prospective study compared 35 individuals practicing the longxing-rou-shen style of qigong with 35 age- and gender-matched individuals receiving biofeedback using electromyography. All patients had been diagnosed with neurosis, headaches, anxiety, and so forth. Following 2 weeks of qigong practice or biofeedback, subjects self-reported the intensity and frequency of 10 subjective indicators of stress including heating, relaxation, awakening, calm, saliva increase, quick thinking, sense of light body, and sense of well-being. The study found that overall measures of frequency and intensity of subjective indicators of stress were significantly lower among male qigong practitioners than in the group receiving biofeedback, but no significant differences were found among females. Possible reasons for this gender difference were not explained.

Two additional studies on qigong as a treatment of anxiety yielded interesting prospective data requiring further replication. A prospective open study conducted in Japan (Kato *et al,* 1992) assessed changes in blood pressure, temperature, heart rate variability (HRV), and state anxiety in 13 subjects following 20 minutes of combined passive and active qigong exercises. Spectral analysis of HRV showed relative increases in sympathetic autonomic activity and relative decreases in parasympathetic activity immediately following qigong exercises, which corresponded to decreased subjective feelings of anxiety. No significant changes in blood pressure or body temperature were found in cases where there was significant anxiety reduction. The authors concluded that state anxiety reduction was associated with increased sympathetic vasomotor tone following qigong practice. Because of the absence of controls and a limited study population, this study receives a rating of 3. Further investigations with improved controls and double-blind design are indicated to verify these results and clarify possible underlying mechanisms of action. At the Second International Conference on Qigong, Chinese researchers (Shan *et al,* 1989) presented results of a small open prospective trial of passive and active qigong exercises in patients with numerous anxiety symptoms. The study examined eight patients who practiced the fang song gong style of qigong 15 minutes daily for one month. Ages ranged from 21-57 years, and all enrolled subjects met DSM-III criteria for different (unspecified) anxiety disorders, reporting primary complaints of generalized anxiety, panic attacks, nervous-

ness, restlessness, fear, headaches, and other psychosomatic symptoms. EEG, galvanic skin resistance (GSR), respiration rate, pulse, and oxygen consumption were measured before and after each qigong practice session. Consistent findings included increased amplitude in the alpha frequency range of EEG and decreases in heart rate, blood pressure, respiration rate, and oxygen consumption. The researchers measured anxiety using the Hamilton Anxiety Scale (HAM-A) before and after each qigong exercise period and reported significant and sustained improvements in state anxiety in five patients who were described as "cured," some improvement in two subjects, and no improvement in one subject. Limitations of this study include a short study period, a small sample size, the absence of a control group or blinded raters, and failure to follow "cured" patients to determine long-term treatment outcomes. Because of these shortcomings, this preliminary study receives a rating of 3, and further studies are necessary to confirm the reported effects of qigong on anxiety symptoms. A final study on qigong as a treatment of anxiety (Hutton *et* ***al.,*** 1996) compared an active form of qigong practice (tai-chi) to a passive relaxation technique (progressive muscle relaxation) in the treatment of pervasive or generalized anxiety symptoms in combat veterans diagnosed with post-traumatic stress syndrome. In this open pilot study, eight veterans were randomly assigned to practice tai-chi or progressive muscle relaxation in eight weekly sessions. Subjects were asked to practice their assigned therapy daily and to monitor practice sessions. Reported decreases in subjective distress were significantly greater in the tai-chi group, and there was a nonsignificant trend toward a relatively greater decrease in heart rate in the tai-chi group. Interestingly, veterans assigned to the tai-chi group showed overall greater compliance with self-directed practice, which likely biased this group toward desirable outcomes in stress reduction and corresponding changes in physiological parameters including reduced heart rate. Verification of results of this preliminary open trial will require additional controlled studies of larger populations. This study therefore receives a rating of 3. The average rating of all reviewed studies on qigong as a treatment of anxiety was 3.0.

c. Qigong as a Treatment of Other Psychiatric Disorders

No studies included in the Qigong Research Database™ evaluated qigong as a treatment of attention deficit disorder (ADD) per se. However, an unpublished study conducted in 1999 examined the effects of qigong practice on aggression, attention, and restlessness in primary school-age children (Cousins, 1999). This open prospective study evaluated the efficacy of weekly qigong "breathing techniques" in two fourth/fifth-grade combined classrooms. Qigong training was conducted on Mondays for 2 consecutive

months. Classroom teachers were interviewed during the early and late phase of the study and 2 months following the end of qigong training. Participating children were not interviewed and did not undergo pre- or poststudy formal psychological assessments. Significantly, the researchers noted that teachers perceived most children as less restless and more attentive during class on the day of qigong practice. However, these effects "were not easily observed" on subsequent days. Many children reported subjective feelings of being "full of energy." Teachers were able to consistently redirect children from aggressive behaviors (including yelling and hitting) using the qigong breathing exercises. All of these changes resulted in significantly greater ease in the management of inattentive or disruptive behaviors in the study group. The significance of these results is limited by the absence of a matched control group, no blind raters, and researchers' failure to measure pre- or poststudy changes in attention or aggression. Further, although many students likely met criteria for attention-deficit disorder (ADD), there was no effort to document symptom severity or clearly diagnose these cases before the study began. In spite of these shortcomings, this study represents an important first effort to explore qigong as an approach to management of disruptive or inattentive behavior in a representative school-age population, including children who likely met criteria for ADD. Future controlled studies using behavior rating instruments and formal diagnostic psychological evaluations are necessary to validate these preliminary findings.

One study (Li ***et al.,*** 1999) examined the efficacy of qigong as a treatment of withdrawal symptoms in heroin addicts. Eighty-six heroin addicts were randomly assigned to receive qigong treatment, medication for detoxification, or symptomatic care only. Individuals in the qigong group practiced the pangu gong style of qigong approximately 2 hours daily and received some emission qigong treatments. Pretreatment and daily measures of EKG, heroin withdrawal symptoms, and state anxiety were taken. Significant findings included a more rapid reduction in withdrawal symptoms, significantly lower state anxiety, and greater improvement in sleep quality in the qigong group compared to the other two groups. All subjects in the qigong group had negative urine morphine tests by the fifth day of treatment, in contrast to the medication and control groups in which urine morphine tests remained positive until days 9 and 11, respectively. The authors concluded that qigong practice is an effective treatment of heroin withdrawal. One study examined the efficacy of qigong as a treatment of psychosomatic symptoms (Pavek, 1998). This retrospective case review examined 25 selected cases of shen qigong as a treatment of numerous psychosomatic symptoms including irritable bowel syndrome, premenstrual distress, and psychogenic pain. The author has claimed the consistent success of shen qigong in relieving migraines, chronic

low back pain, and other psychosomatic symptoms that are presumably manifestations of repressed or suppressed emotions. Although general observations based on this case review study are interesting, systematic data are not presented, and there is no proposed pilot study. Because of these limitations, this study receives a rating of 1.

V. SIMPLE TREATMENT: COMMON TREATMENT APPROACHES FOR DEPRESSION, ANXIETY, ADD, AND ADDICTIONS

Results of studies of qigong in the treatment of depression, anxiety, and mental health in general are discussed in Section IV. This section provides a general overview of concepts underlying qigong in the clinical treatment of anxiety and depression in general. The selection of specific qigong treatments targeting certain emotional or psychological symptoms is based on relationships between specific emotions and the five yin organs according to Chinese medical theory (Johnson, 2000, chap. 32). For example, in Chinese medical theory, the liver is associated with anger and "negative" emotions including jealousy, rage, and blame. The initial tasks of the qigong doctor are to educate the patient about these relationships and to take a complete "energetic" history of emotional symptoms, which is the first step in diagnosing a specific energetic imbalance. According to medical qigong theory and Chinese medicine in general, there is a relationship between a specific energetic imbalance and specific physical and emotional symptoms. Various meditation exercises are prescribed to release toxic energy or transform negative energy and associated emotions to desirable emotions. Important qigong exercises used for these purposes include the "pulling out the pain meditation" and the "Soul retrieval meditation" (Johnson, 2000, p. 581).

As discussed earlier, most psychoemotional disorders are believed to result from dysregulation of the shen. Therefore, in general "calming the shen" is the most important goal of emission qigong treatment directed at common psychiatric disorders. Qigong exercises prescribed for various disorders have a similar goal. When discussing qigong therapy for psychiatric disorders, it is important to distinguish self-treatment by qigong practice from treatment received from a qigong master for a similar complaint. Both self-directed and external "emission" qigong treatments for psychological or emotional disorders have been described, including techniques for phobias, anxiety, disorders related to stress, anger, and grief or sorrow (Johnson, 2000, chap. 53). In his seminal textbook on medical qigong, Dr. Johnson (Johnson, 2000, chap. 32) lists six principle energetic methods for healing emotional trauma including

"emission[7]" qigong therapy by a qigong doctor, massage, breath-centered work, dynamic postural therapy (active stretching), and qigong meditation. In general, qigong practitioners strive to attain continued good mental health through the routine practice of certain meditation and postural techniques aimed at preserving mental tranquility and emotional balance. These techniques are collectively known as "mental dao yin training." In this sense, Chinese medical qigong is routinely practiced to prevent development of anxiety, depression, and other psychiatric symptoms (Johnson, 2000, p. 362). Beyond these basic "maintenance" aspects of qigong practice, the advanced practitioner of qigong is instructed in specific meditation techniques to transform destructive emotional or psychological patterns into "healthy" patterns using visualization, imagination, and self-affirmations. Pursuing these teachings with intensity and discipline will eventually bring the practitioner to deep spiritual insights and possibly personal transformation (Johnson, 2000, p. 374).

According to Chinese medical theory, grief or excess sadness is often associated with liver qi stagnation, excess qi in the lungs, and discomfort in the chest. Prolonged grief may damage the heart. Specific qigong exercises or "emission" qigong treatments are therefore directed at correcting these imbalances. In contrast to depression, anxiety is associated with the descent of the water qi related to a pathological disturbance of the kidney's Jing energy. Mayer (Mayer, 1997) has developed an integrative approach for treatment of anxiety disorders that combines depth psychotherapy, Western relaxation techniques, cognitive restructuring, and qigong. His book describes case examples in which this approach was successfully used to treat generalized anxiety and panic attacks. Medical qigong does not offer specific standardized treatment protocols for specific disorders, as the most efficacious emission qigong treatment or qigong practice technique depends on the manifestations of energetic imbalances in the context of the specific energetic constitutional pattern of each patient.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

Many colleges of traditional Chinese medicine in China, the United States, and Western Europe offer courses or formal certification training programs in medical qigong (Johnson, 2000, chap. 1). In China, certification usually requires completion of a 3-year program followed by an internship. In contrast, Western training programs in medical qigong vary greatly in duration and content. Students typically combine training in medical qigong with other areas of Chinese medicine, including diagnosis, acupuncture, the

preparation of herbs, and moxibustion. Courses in Western medicine, including gross anatomy, physiology, and pathology, are usually required. The first free-standing medical qigong clinic was inaugurated at Five Branches Institute of Traditional Chinese Medicine in Santa Cruz, California, in early 2000. Dr. Jerry Johnson (Johnson, 2000) and others hope to develop this program into a formal 3-year curriculum followed by a supervised internship in all aspects of medical qigong. Few rigorous training programs in medical qigong exist in the West at this time. Therefore most people seeking a referral to a qigong doctor for emission qigong treatment or a competent mentor for training in self-directed medical qigong must decide whom to consult on the basis of comments by peers who may have undergone medical qigong therapy. At present state medical boards do not screen medical qigong practitioners based on certification or experience. This is due in part to the fact that satisfactory criteria for certification have not yet been clearly established by the National Qigong Association or the Qigong Institute. However, several well-known medical qigong instructors, including Jerry Johnson and Mark Cohen, certify their own students based on rigorous examinations and supervised training using medical qigong in clinical settings.

VII. ACKNOWLEDGMENTS

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VIII. RESOURCES

The Qigong Institute
Ken Sancier PhD, Director
561 Bekeley Avenue
Menlo Park, CA 94025
Web site: www.qigonginstitute.org
E-mail: qi@qigonginstitute.org

National Qigong Association
P. O. Box 540
Ely, MN 55731
Web site: www.nqa.org
E-mail: info@nqa.org

China Healthways Institute
Richard Lee, Director
115 N. El Camino Real
San Clemente, CA 92672
Web site: www.chinahealthways.com
E-mail: chi@exo.com

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Chapter 10

Breath Work

Barry A. Sultanoff, MD

I. INTRODUCTION AND OVERVIEW

A. THE GIFT OF BREATH

In a Hollywood movie that I saw recently, the heroine paused at a pivotal moment in the plot, fixed her eyes upon the male protagonist, and delivered this dramatic line: We can change our life with every breath we take.

The message that she uttered in that insightful moment was not only powerful theatrically-it was true. Our breath is a gift whose value is beyond measure. It continually reminds us of what's possible, of what can be. As you will see, breath is our most immediate, intimate link with the world around us. Through our breathing, we become part of a seamless continuum that melds what's inside us with what's outside.

Handbook of Complementary and Alternative Therapies in Mental Health

On the most obvious level, breath is essential for our physical survival. It is a self-renewing reservoir of oxygen, freshly available as each new round of breathing ripples through. Over and over, approximately six to eight times every minute, we repeat this natural cycle: inhale, exhale, inhale, exhale.

As we learn to make conscious use of this powerful presence within, we are reminded, moment-to-moment, of unlimited possibilities that beckon us, even as we grapple with mundane issues of everyday living. For indeed we *can* change our life with every breath we take. With the blossoming of each new breath, we encounter the next fresh moment, ripe with potential.

Whatever we may want, be it a momentary preference or a lifetime goal, our breath offers a pivotal moment, a literal turning point, from inhale to exhale and then again, from exhale to inhale. Breath offers us this second chance over and over. We need only to pause, recognize the golden opportunity, and utilize it to further our goals and enhance our well-being.

The breath is a powerful key to the healing power latent within everyone. Through breath, we open to life's abundance. Rooted in the rhythm of the breath, a rich harvest of health benefits awaits us.

B. THE SCOPE OF BREATH WORK

Breath work is a broad topic that encompasses many different modalities. The applications of breath work are myriad. For example, breath work has been used in the treatment of respiratory problems such as asthma and sinusitis as well as for other medical conditions such as chronic headaches, irritable bowel, and menopausal hot flashes. Breath work has been utilized in recovery from addictions and to enhance sports performance. It has been used by individuals dealing with anxiety, depression, and attention deficit disorder1 attention deficit hyperactivity disorder (ADD/ADHD), and by couples seeking to improve their relationships.

Literally thousands of different breath work techniques have been described. These run the gamut from something as basic as pausing for a moment to observe the breath to complex yoga techniques that involve breath retention, complex postures, and complicated counting routines. Breath work approaches range from simple in-the-moment "mindful breathing" that can be practiced by anyone at any time to lengthy and intensive guided sessions requiring specific training, such as the "holotropic breath work" developed by Stanislav Grof and now practiced by a variety of professionally trained facilitators (see Section VI).

The end of this chapter lists resources for further study of these more advanced techniques as well as references to the simpler approaches. Here we'll be taking a very practical approach to breath work. We'll focus on

those breath work styles that can best be incorporated into the practice of psychotherapy - simply, safely, and effectively. In doing so, we'll take to heart the wise advice of Hippocrates, to be sure to "do no harm"while giving ourselves free rein to explore techniques that can, in fact, do a great deal of good.

Our breath is something that we always have with us. In that way it is eminently practical. The biggest hurdle for most clients will be to learn how to slow down enough to become conscious of the restricted way that they already may be breathing. With that awareness, they can learn to breathe more naturally, in a way that is generally referred to as abdominal-diaphragmatic (A-D) breathing.

This will be our rule of thumb: the simpler, the better. Breath work is not about trying to figure anything out. Rather, it gently nudges us toward a territory that is outside the purview of the complex mind, to a place where what is beyond thinking can flourish. The thirteenth-century Sufi poet Rumi put it this way: "Outside all ideas of right doing or wrong doing, there is a field. I'll meet you there!"

C. BREATHING AS A BRIDGE

Our existence depends on our moment-to-moment participation in the process of breathing. Without life-giving oxygen and the willing parade of red blood cells that carry it to our organs and tissues, we would quite simply die within minutes.

Indeed, from the moment we are born, we are breathing-breathing in and breathing out. Throughout our lives, we commune with this primal, unceasing rhythm of the breath, inhaling and exhaling more than ten thousand times every day. Breath is always with us. It is our faithful traveling companion, "inspiring" us to continue, ever-onward, on life's journey.

Breath is the bridge that connects us most directly with our vitality and with our capacity to feel. Open, relaxed breathing enhances life energy. Through breath, we can engage and express our emotions more fully and reconnect with repressed feelings and memories. We can bring lost parts of ourselves back into our conscious awareness.

Through breath, too, we come into harmony with the natural world and its universal rhythms. By consciously attuning to our own "little" breath, we can reap the profound peace that comes from connecting with what *is bigger than ourselves,* with "all that is." Through breath we learn to listen beyond the prattle of everyday conversation and tap into what is timeless as we surrender into, and thus partake of, the ineffable wisdom that lies beyond our minds.

Through breathing, we connect more powerfully with our own physical selves too. Breathing links body and mind; it masterfully bridges these two aspects of our being. The breath supports our metabolism, assuring that tissues and vital organs are oxygenated via hemoglobin transfer. The *way* that we breathe (for example, the depth, rate, and regularity of breathing) has impact too, on more subtle functions related to the flow of vital energy throughout the body-mind.

As we breathe, the boundary between what is inside and what is outside of us becomes ambiguous. One might well ponder, "Where does the breath cease being 'it, out there' and become part of what is 'me, in here[7]?"

D. THE CONSCIOUS DANCE OF BREATH

Most of the tens or even hundreds of millions of breaths that we take over the course of a lifetime happen unconsciously. Typically, unless we're experiencing respiratory distress, we're not paying much attention to our breathing. The process occurs automatically. Yet there are many ways to breathe consciously, to actively "dance with breath," that can promote emotional balance and well-being. These techniques of conscious breathing can provide remarkable health benefits - physical, emotional, mental, and spiritual.

The revitalizing effects of conscious breathing have been described over the centuries in many spiritual traditions, most notably in the yoga traditions of India. These yogic ways of breathing, introduced to the West by Swami Vivekananda at the Parliament of the World's Religions in Chicago in 1893, are described in detail in many of the sacred Hindu (Sanskrit) writings.

Modern science confirms anatomically what yogis have long known and practiced: The diaphragm muscle, whose function is directly related to the ease and depth of breathing, is a unique muscle that responds to both conscious and unconscious direction. Conscious abdominal-diaphragmatic breathing, which is at the core of many breath work techniques, has a myriad of health benefits, both obvious and subtle, whereas *restriction* of breath (typically unconscious) depletes energy. It characteristically promotes restlessness, worry, and feelings of isolation and insecurity.

The power of breath is revered in many world cultures. Not surprisingly, breath's potency-of nearly mythical proportions-is central to a variety of creation stories that span diverse cultures. Indeed, breath is often considered to be so powerful as to be named the source of all creation.

In the Hebrew/Kabbalistic tradition, the breath (spirit, wind), or *ruach,* is considered to be an important center of life and awareness. *Ruach chaim* means "spirit of life." In Christianity, the term "Holy Spirit" derives from the

Latin *spiritus,* a word that also means "breath." In many Native American traditions, it is believed that God, or Great Spirit, created the universe by exhaling into the Great Void, imbuing it with the miracle of life.

II. **RELEVANCE FOR MENTAL HEALTH**

A. BREATH WORK/BREATH PLAY

In modern times most of us, practitioner and client alike, have become so caught up in the pressures of doing, of working diligently at whatever we're trying to accomplish, that using the term "breath *work"* may be counterproductive. A more suitable term, and one that I definitely prefer, is "breath *play. "* Given our societal penchant for out-of-balance efforting, an intention to engage in breath play will ultimately be more conducive to healing.

The term breath play suggests an attitude of friendly exploration, rather than overly serious striving. It resonates with words like *allowing, releasing, feeling, sensing, receiving, being,* and *relaxing.* It is compatible with terms such as *settling in* and *letting go.* A focus on *play* is more akin to right brain activity than to left and is more naturally supportive of a style of open-ended, creative exploration that we want to encourage.

As psychotherapists, we often seek to help our clients reduce or balance stress, calm anxiety, lift depression, overcome addiction, or neutralize distraction, depending upon the situation. Often the client's behavioral pattern of working too hard and efforting too much is already part of the dysfunction. Consumed by a never-ending struggle to catch up, the client may be addicted to stress, trying too hard to please others or himself by striving to achieve unrealistic goals.

The term "breath play" invites safe participation: There will be nothing to fear, no standard of right or wrong to comply with. Instead, there will be the surprise of discovering one's own unique way, within the flexible framework that each technique offers. Breath play implies a light touch. It conveys welcome and acceptance, for both adult and (inner) child, making room for whatever comes forth through playful, open exploration.

B. A LANGUAGE OF FEELING

As we look at particular techniques, we'll want to choose a language that is conducive to healing, that offers the client clues and encouragement for letting go into an experience of relaxation and rebalancing. We'll favor approaches that offer a high likelihood of success, that are easy to learn and to practice.

In the discussion that follows, the term "breath worklplay," rather than "breath work," will be used to convey the light-hearted spirit in which we'll want to proceed. This term can help us embrace an attitude of friendly exploration. The value of any breath work/play technique is, in general, inversely proportional to its complexity. Consequently, in making selections for this chapter, my two main criteria have been simplicity and effectiveness.

III. SAFETY AND COMPATIBILITY WITH CONVENTIONAL CARE

With regard to safety, breath work falls into two categories. Most approaches are totally safe, with no known contraindications. Others, although they can be valuable and effective, must be approached with caution. Their potential for activating repressed feelings and emotions - a n d their unpredictability in terms of the timing and the intensity with which they may do so—must be respected.

Within the yoga tradition there are breath work techniques as innocuous as refocusing one's attention in order to increase an awareness of the process of breathing. This is totally safe, with the exception of its use with actively psychotic patients. With these simpler approaches, the only limitation is the client's capacity and willingness to focus.

Other yoga techniques feature hyperventilation and other more vigorous styles of *pranayama.* I do not view such techniques as "dangerous." In fact, one of their advantages is that they can help make repressed emotions more accessible and thus more available for the client to own. However, because they can activate emotions intensely, they should only be taught by a fully trained instructor in a setting where psychological/emotional support is available should it be needed.

All of the breath work/play strategies described next are in the former "totally safe" category. In my own experience and in the experience of many colleagues who use them regularly, they are beneficial and without side effects. These breath work/play practices are compatible with all aspects of conventional care. They are quite basic, helpful to virtually anyone who uses them.

IV. TREATMENT APPROACHES

A. PRACTICAL SUGGESTIONS ON HOW TO PROCEED

As already noted, an advantage of breath worklplay as a therapeutic modality is that our breath is always with us. Breath is a birthright. It is freely

available to all. For the approaches we'll be considering, no props are needed nor does anything have to be purchased. All that's required is the knowledge of how to proceed, and a willingness - ideally, an inspiration-to do so.

These approaches are best explored playfully, in a spirit of adventure. It will be helpful to remind your client that there is nothing to achieve. There is nowhere to go. Breath work is learning how to be, right where one is.

It will be helpful, too, for practitioners to perform the techniques themselves, as they guide their clients. In this way, the practitioner creates an energy field or template that can be as important as the words themselves. By actively participating in this engaged way, the practitioner not only gives the client verbal instruction, but also creates, through his or her own example and being, an energetic context in which the client can best learn how to experience the benefits of each technique.

All of these approaches have in common the activation of the natural rhythm of the breath, so that it can function as an innate natural healer. In this quest for hidden treasure the practitioner serves as a dive instructor who helps the client discover and make conscious use of a resource that has been underutilized, left lying fallow by a lifelong habit of inattention - his or her own precious breath!

The breath work/play approaches that follow combine elements of imagination and visualization, sensing and feeling, focusing, affirmation, and physical alignment. Their success will depend on the client's ability first to learn them and then to apply them in everyday life. Clients will have to refine their capacity to recognize and flag those moments when things are not going so smoothly-and then be willing to take a "time out" from whatever's going on, in order to change course.

B. SPECIFIC BREATH WORK/PLAY STRATEGIES

The first exercise is one that I consider foundational to all breath work/play. I teach it to virtually all my clients-and then offer it afterward as a written handout.

1. Stop, Look, Listen, and Choose

This is a focusing/reframing exercise that can be used any time your life is feeling out of kilter; that is, when things are not going the way you want. Here, you can shift the way you look at the circumstances in your life. You can change the "lens" through which you look at the world, and the way you feel, anytime yon choose!

In any moment, you can move from an experience of anxiety or overwhelm (and the panic or immobilization that may accompany it) to healthy, empowered action. At

first, it may take you several minutes to complete this exercise; but you will find that as you practice and become more familiar with the steps, you'll be able to do it very quickly, probably in 30 seconds or less.

Inevitably, life has moments that are problematic. At such times, we may find ourselves at a crossroads, something akin to approaching a railroad crossing, where a speeding train is about to barrel through. If we choose to, we can stop, look, listen, and judiciously pause so that we won't be hit broadside by the approaching train!

Here, the speeding train represents an old habit, an old way of processing life experiences that has been unsuccessful, one that in the past has led to distressed feelings and thoughts. However, we needn't continue to be run over--or overwhelmed-by these old habitual ways that are no longer serving our best interests.

In this exercise, you utilize your capacity to pause-to stop, look, listen-and then choose the path that you truly desire. You can use this approach to change course, whenever you find yourself thinking and behaving on automatic.

1. Stop. Take a full, easy breath. Then, call "time-out" or "blow the whistle." (If you like, make the letter "T" with your hands, affirming that you are the referee of your own "game of life.") Remember that the old way you've been proceeding, though perhaps very familiar, is *not* the only way to go. There are many other options.

2. *Look.* Take another breath *and now take a candid look at what's going on.* Ask yourself the question, "What's going on here?" and answer that question for yourself with a brief "news report" (include the news of what's going on *inside* you, in your feelingslemotions, as well as outer events). For example, "Well, what's going on is that I'm feeling tired and irritable. I'm stuck in traffic and I'm feeling anxious about being late for the meeting."

3. Listen. Feel your feet, especially the bottoms of your feet. Feel the earth beneath you. Bring your awareness to the feeling of contact that the soles of your feet make with the earth or the floor.

Now bring your attention to your chest, especially to the area that's approximately in the center of your chest, near your heart. Become aware of your breathing. Notice the *feeling* in your chest, in whatever way you may sense this. Listen to your heart and ask yourself, "What do I *really* want?" Then, answer that question for yourself, letting whatever is your heart's desire right in that moment guide you.

4. *Choose.* In one sentence, beginning with the words "I choose to enjoy . . . ," formulate a choice that expresses how you *want* to be feeling1 experiencing the situation that you're in. What do you really want, right here, right now? (For example, "I choose to enjoy feeling balanced and at ease, confident that I will arrive at the meeting at just the right time.") Feel yourself breathing life into this choice.

5. Let it go. Having made your choice and activated it with your attention and your breath, release it. Get on with your life. You've done your work, you've planted the seed, so just let it be. Take an easy breath, especially focusing

your attention now on the exhale, as you let it out with a sigh. To use a golfing analogy, what you've just accomplished is this: You've retrieved your ball from the rough and-ever-so-gently-placed it on the fairway (of life) again.

2. Conscious Abdominal-Diaphragmatic (A-D) Breathing

Humans naturally breathe in a way that is relaxed, open, and free of restriction. It is normal for the breath to flow into all the lobes of the lungs, with the sensation that it is also filling the abdomen. In today's world, however, this natural way of relaxed, easy breathing is far from typical.

A fundamental practice of breath work/play involves remembering and tuning in to the way one naturally breathed as an infant or young child, before the development of emotional patterns - anxiety, fear, anger, depression, etc.—which negatively affected the flow of breath into the lungs. Unconscious patterns of tightening the muscles, including those of the torso and rib cage, also contributed to this restriction of movement.

The key to natural breathing, then, is remembering; that is, developing a capacity to step free of the "trance" of one's typical habits in order to see what's going on. Having paused to "catch oneself in the act" of shallow or restricted breathing-and then affirming the possibility of breathing more freely - one can form an intention to allow the breath to flow more fully, easily, and naturally. With that intention, or choice, in place, one can practice in one of the following ways (the client initially learns these techniques under the guidance of the practitioner and then practices them independently):

a. Without Hand Placement

Instruct the client as follows. (Practice the exercise yourself as you are guiding. Take your time. Go slowly.)

> Remembering that relaxed, easy breathing - in which your belly is soft and your diaphragm is relaxed-is your birthright, your natural way of being, choose to allow the breath to flow fully into your lungs and belly. Notice how you've been breathing, *without trying to change anything.* Now, just let yourself breathe like you once did as an infant or as a child, effortlessly, trusting that you know how to do this, knowing that there's no "right" or "perfect" way, that your way is just fine. Be aware of feeling safe and protected and warm, at home within yourself, at peace. Notice how you've been able to relax yourself just by allowing yourself to breathe easily and freely.

b. With Hand Placement

i. Variation I: Hands on Chest/Belly Instruct the client, who is either in a seated or a reclining position, to place his or her hands lightly on the front of

the torso, with the left hand resting on the breastbone and the palm of the right hand just below the navel. Clients will typically experience this hand position as safe, soothing, and reassuring. Slowly say the following:

> So now, just allow the breath to fill your belly. You may even feel a slight rising and falling of your hands, as the breath fills both your chest and your belly. Notice how good it feels to breathe this way, with your hands in place. Notice how relaxed and easy and safe you feel. You have nothing else to do right now but breathe. You have nowhere to go. Just be here now-relaxed, easy, and safe.

ii. Variation II: **Both Hands on Belly** Instruct the client to place both hands lightly on the belly, one on either side of the navel (the exact positioning is not crucial). Say the following:

> Now, feel the air filling your belly-like a balloon that just loves to be full-just allow as much air as feels right to you to fill your belly balloon. You have nothing to do except enjoy the experience of breathing-fully, easily, and freely.

3. Sacred Intentional Breathing

Poet Mark Nepo has developed an approach to healing emotional wounds that integrates imagery, personal story-telling, and focused breathing. This way of healing features an attitude of deep reverence for all life. The client is helped to gain deeper insight into the underpinnings of his or her emotional pain and to move through it by using contemplation linked with gentle breathing.

Here's an example of Nepo's "sacred intentional breathing." This exercise can help facilitate the grieving process - a n d thus assist the client in healing "heartbreak" and the pain of loss. Examples of sacred intentional breathing for dealing with a variety of other personal issues can be found in ***The Book of Awakening*** (Nepo, 2000).

Read the following narrative to the client and then guide the client experientially. Afterward, dialogue about the thoughts and feelings that the exercise evoked in the client.

THE LESSON

God breaks the heart again and again and
again until it stays open.

Hazrat Inayat Khan

> When young, it was my first fall from love. It broke me open the way lightning splits a tree. Then, years later, cancer broke me further. This time it broke me wider,

> the way a flood carves the banks of a narrow stream. Then, having to leave a twenty-year marriage. This broke me the way wind shatters glass. Then, in Africa, it was the anonymous face of a schoolboy beginning his life. This broke me yet again. But this was like hot water melting soap.
>
> Each time I tried to close up what had been opened. It was a reflex, natural enough. But the lesson was, of course, the other way. The lesson was in never closing again. ***(Book of Awakening.*** Mark Nepo, p. 419. Gohari Press, 2000.)

- Center yourself, and concentrate on the part of your heart that is breaking open right now. (pause)
- Ease the pain by breathing deeply through the break. (longer pause)
- Try if you can, just for a moment, to leave your heart open and look inside the break. (even longer pause)

Case History

Sanford, a depressed patient whom I'd been seeing in weekly psychotherapy for about a year, had at first responded well to antidepressant medication. However, because of persistent insomnia with the medication and also his expressed desire to phase out this pharmacological approach to his emotional distress, we agreed to try SAMe *(S-adenosyl methionine,* an amino acid derivative) as an alternative.

Sanford did well with the SAMe: His insomnia was diminished and his residual depression was mild and manageable. Then, after much deliberation, he found the strength to end a stormy, long-term relationship with his girlfriend, in whose home he had lived for 10 years as her partner and as father figure to her now-teenaged son.

Sanford's adjustment to living on his own was shaky and problematic. He felt panicky. Often he could not resist the urge to pick up the phone and call his "ex-," even though she continued to be disdainful of his attempts to reconnect.

Sanford reported feeling painfully isolated, unlovable, and worthless. He was depressed, with persistent suicidal ideation.

Breath Work/Play as Part of the Therapeutic Approach

As Sanford had always been rather dissociated from feelings in his body (his physical body was tight and tense and his breathing quite shallow), I decided to incorporate some simple breath work/play approaches into our sessions. I taught him A-D breathing and found that hand placement on chest/belly (Technique 2(b), Var.1). was particularly helpful for him. Breathing consciously with his hands in that position, he reported feeling "safe" and "protected": "I *can feel me loving myself," he reported, and that really feels good!"*

I then introduced him to the practice of "sacred intentional breathing," as described in ***The Book** of **Awakening. I*** suggested that he read a section of that book each day so that he could guide himself in the process throughout the week. Then, as part of our next psychotherapy session, I read him the entry cited in Technique 3 and guided him experientially.

Discussion and Course of Treatment

At our session, Sanford responded well to this use of sacred intentional breathing as a self-nurturing "therapy" for his feelings of grief/heartbreak. He liked that particular section so much that he continued to read and practice it on his own. He also continued to explore what I had shown him about placing his hands on chest/belly while breathing consciously. He found that this was easy to do at various times throughout the day, for example, while sitting at his desk at work. He also found this technique to be effective in helping him fall asleep more easily at bedtime.

In the ensuing weeks, Sanford joined a local meditation group and began to make new friends. He went on a 5-day silent retreat with 40 other people, most of whom were far more experienced at meditation than he was. Though that experience was challenging for him, he found that it helped him regain his perspective and emotional equilibrium.

He began to recognize that the stories he'd been telling himself about his ex-girlfriend (the ones that had fueled his yearnings to reunite with her, as well as his negative judgments of her faults) were "only stories" that he could now rewrite, if he chose, in a way that was healthier for him and left him feeling more at peace.

Sanford has continued his breath work/play practices and is beginning to explore new relationships. He has been reconnecting with old friends, too, with whom he'd been out of touch for years. His mood is upbeat and he's feeling optimistic about the future.

4. The Secret

Here, the client is encouraged to "have fun by using his imagination" as a way of calming and centering himself. (Reminder: This exercise will be most effective for the client when the "coach" practices it himself while leading it.)

> Every time you take a breath, you welcome and receive oxygen into your lungs. This life-sustaining oxygen is distributed throughout the body by way of the bloodstream. It is carried by a system of "roadways" that vary in size from major "highways" called arteries to smaller "byways" called arterioles and capillaries. The oxygen that travels along these pathways brings life to all your cells.

By using your imagination, you can magnify the efficiency of this oxygen transport system. You can play a powerful role in enhancing your own vitality and achieving centeredness and calm.

All you'll need to know is this "secret" about yourself:

You have a unique anatomy that is known only to you: Your lungs are located in your belly, right behind your navel.

So right now, imagine that your lungs are in your belly. You can let your eyes be closed, if you like. Feel your lungs in your belly comfortably nestled in, right behind your navel, with plenty of room to expand and contract (pause). It's perfectly safe for your lungs to be there, in your belly. Simply enjoy this feeling for a few breaths or for as long as you want (longer pause), and just continue to notice how you feel when you breathe this way (pause).

OK, good! Now remember, too, to check in with your lungs from time to time during the day, just to make sure that you're breathing into them. See and feel the breath of life traveling there, flowing easily into the lungs in your belly, carrying life-giving oxygen to exactly where it needs to go.

This secret can change your life. Knowing this secret, you have the power to calm and steady yourself, anytime you want (pause). If your eyes have been closed, you can let them be open now, taking as much time as you want, as you allow your eyes to slowly open.

5. Earth-Tandem Breathing

The real miracle
is not to walk
either on water
or in thin air
but to walk
on earth

Thich Nhat Hanh

Our connection with the earth is as basic to life as breathing. By learning to breathe consciously, in tandem with the earth beneath us-and in particular, by increasing our moment-to-moment awareness of earth's living presence through the contact it makes with our feet-we can steady and center ourselves whenever we choose.

The most effective way to do this is to focus attention on the part of us that makes the most direct contact with the earth; namely, the *soles* of our feet. Energy follows attention. Thus, by shifting some of our awareness into the soles of our feet, we automatically become calmer, as excess energy from our minds shifts downward, becoming more "grounded" into the earth. Guide your client as follows:

First, take a comfortable sitting position, with your eyes either open or closed—whichever is more comfortable for you. Now, allow yourself to begin to "touch your feet with your attention." Just notice anything that's true in this moment about how

your feet feel. Is one foot easier to feel than the other, or are they about the same? There's no particular "right way" to do this. Just explore playfully, trust yourself, and notice whatever is true for you, right in this moment, about how your feet feel.

Beneath your feet is Mother Earth. She lives and breathes. She is your living planet. She is always there, your resting place, supporting you. This Mother Earth will breathe with you whenever you pause to let her in, so just let go. Feel your belly rising as each breath inflates your lungs filling them with vital oxygen.

Can you feel your toes, the arches? Can you feel your heels, all the places where your feet are meeting solid earth beneath? As you meet your Mother Earth, welcome in her steadiness.

Let the bottoms of your feet be "ears" that listen to the whisper of her breath, like a gentle wind that strokes your soles and nourishes your soul. Feel her belly rising, almost imperceptibly, as your belly rises too. Breathing in, receive the gift of earth's reliability. Breathing out, let go. Release right through your feet

You're here right now, you're not alone. Right from the moment of your birth you're breathing with your Mother Earth (pause). Now, if your eyes have been closed, allow them to gently open.

(Remind the client that this exercise of breathing in tandem with the earth can be practiced at "odd moments" in everyday life, such as while standing in line at the grocery store or bank, while waiting at a stoplight, or while walking.)

6. Singing and Chanting

a. The Joy of Singing

Centuries ago, the Japanese haiku master Issa wrote this charming verse:

Even with insects
some can sing
some can't

In my role as "health coach," I encourage my clients to sing, even if they are at first resistant to this idea. I encourage singing - whether right out loud in public or more discreetly in the shower or driving in the car - as a kind of spontaneous breath work/play, familiar and available to everyone. My experience is that virtually everyone can sing. But many have not done so since childhood. One effect of singing right out loud is that breath resonates through the body, resulting in a kind of full-body massage - from head to toe, from the inside out. This vocally generated self-massage activates life energy. It aids emotional balance. It lifts the mood, reduces stress, allays anxiety, and improves focus. It "vibrates" organs, bones, and muscles, improving the circulation of blood and lymph.

Singing can help allay feelings of separateness and aloneness that are prevalent among the clients we see. In most cultures, singing is not some-

thing reserved for the vocally intelligent, nor is there a vocal elite. Singing *includes.* It is part of the sacred fabric of community.

b. Chanting OM

Breath has been used as a path for spiritual development in meditative techniques that span many eras and cultures. Chanting is one nearly universal way of engaging that meditative experience. In India and other Asian countries, one hears the sacred sound *OM* chanted in homes, temples, and in the streets. In the United States, it is more often being heard too, in yoga classes and meditation centers.

OM is a universal healing sound. Hindus and Buddhists (as well as Western yoga/meditation teachers and their students) believe that when you chant *OM,* you adjust your own vibrational frequency to resonate with this primordial sound of creation.

The sound *OM* is actually composed of three separate sounds. Each of these mini-mantras represents an aspect of being, or stage of life: birth, sustenance, and dissolution (or death). When you chant *OM,* all of these sounds blend together and become one. Chanting the sound *OM* can facilitate the integration of the various parts of one's life into a more coherent whole.

The sound *OM* is made up of three sounds, or tones: The first sound is "ahhh." This is the sound of birth. The second sound is pronounced "ouuu," as in the word "you," but without the "y." This is the sound that contains the energy of life's persistence or continuation. The third sound is "mmmm," the sound of release or letting go. *Ahhh . . . Ouuu . . . Mmmm.*

I teach my clients to take a full, easy breath and chant the sound *OM* on one complete exhale, along with me, allowing the "ahhh, ouuu, mmmm" sounds to flow together into one complete sound. I suggest that as they do so they imagine their individual *OM* resonating with this universal sound of creation. Sometimes we begin or end our session with the chanting of *OM,* typically chanting this sound three times together.

The essence of what I tell my clients is this: *Sing for your health and well-being, for your upliftment, for the joy of creation. Sing to yourself to your children, to whomever will listen! Most important, sing for no reason at all; just sing as the birds do. The new day has dawned. It is only natural for you to join the chorus.*

V. T RAINING AND CERTIFICATION

All of the breath work/play approaches discussed in this chapter can be easily learned by the practitioner and safely taught to the client. No formal

training is required. As previously mentioned, there are some advanced techniques that do require intensive training. The following programs offer certification in these more advanced techniques.

A. ANUSARAYOGA

Anusara yoga, as developed by John Friend and taught by certified teachers, includes many powerful breath work/play techniques. Anusara yoga is a uniquely integrated approach to hatha yoga in which "the art of the human spirit powerfully blends with the science of bio-mechanics."

Anusara means "going with the flow of Grace." In practicing anusara yoga, one learns to lovingly and artistically offer his or her individual light and unique music to the flow of life. Mindful breathing is part of every aspect of this practice. For further information call (888)398-9642, or visit www.anusara.com. A training manual, which describes many of the principles and practices, is available.

B. INTEGRATIVE BREATH WORK

Jacquelyn Small, of Eupsychia Institute in Austin, Texas, certifies students in a method of breath work that she calls integrative breath work. This is an adaptation of the holotropic breath work developed by Stanislav Grof, MD, with whom she cofacilitated workshops for some years.

Integrative breath work uses evocative music and deep breathing to bring forth a shift of consciousness in which the client moves past his or her usual ways of seeing, hearing, and breathing. Practiced within the "sacred space" of a safe therapeutic setting, and with adequate guidance and supervision, the practice of integrative breath work can help open the client to whatever dimensions of consciousness are needed for healing to occur.

Eupsychia offers intensive trainings for practitioners (see Section VII).

C. RIDING THE WAVE

Author Stephen Cope, in his book *Yoga and the Quest for the True Self* (see Section VII), describes a breathing practice called "riding the wave," in which one learns to "stay with" feelings as they emerge-so that they can be fully experienced and integrated into one's conscious awareness. The five parts of the "riding the wave" technique are *breathe* (fully, without restriction), *relax* (especially by softening the muscles of the belly), *feel* (by actively

experiencing the sensation evoked), *watch* (i.e., witness what is taking place), and *allow* (let it happen, rather than trying to control or understand it). "Riding the wave" is a kind of generic approach to breath work/play, with wide applicability for many kinds of clients. For a detailed description, see pages 212 to 215 of the aforementioned book.

The "riding the wave" technique is taught nationally by one of its creators, Sandra Scherer (Dayashakti). For details, contact Kripalu Center for Yoga and Health, Lenox, Massachusetts, (800)741-7353; www.kripalu.com.

VI. RESEARCH/SCIENTIFIC **DOCUMENTATION**

The seminal research linking breath work with both physiological and emotional changes was that of R. K. Wallace and Herbert Benson (Wallace *et al,* 1971), who investigated transcendental meditation (TM) in the early 1970s. Their breakthrough article, "A Wakeful Hypometabolic Physiologic State," published in 1971 in the *American Journal of Physiology,* established meditation as a legitimate treatment modality for a wide range of stress disorders.

Three years later, Benson published the results of this and additional studies, coining the term "the relaxation response" (Benson *et al,* 1974). This relaxation response invoked by meditation was the antithesis of the fight-or-flight response first described by Walter B. Cannon in the early twentieth century and researched by Hans Selye in the 1940s.

The fight-or-flight response was understood as having been adapted for survival under circumstances in which our human forebears had had to contend with real and frequent threats to their life and well-being. This physiological syndrome has become dysfunctional and health destructive, however, in modern societies, which feature chronic exposure to stressors of all kinds.

By the early 1990s, Benson felt confident enough about the quality of the research data to affirm that "many studies have now shown that in people who regularly elicit the relaxation response, there is a decrease in anxiety, anger, and hostility, as well as depression" (Goleman, 1993). In addition, "The relaxation response has been proven beneficial in many stress-related conditions . . . enhancing both mental and physical health" (Goleman, 1993).

In 1992, Jon Kabat-Zinn, a proponent of "mindfulness meditation," published a study in the *American Journal of Psychiatry* that proved the effectiveness of yet another form of meditation in treating anxiety disorders. (Kabat-Zinn *et al,* 1992).

Of particular interest for our discussion on breath work and emotions is that this relaxation response, which also could be invoked in ways other than meditation, had a consistent, demonstrable effect in reducing anxiety.

In recent years, studies by Dharma Singh Khalsa, MD (Alzheimer's Prevention Foundation, Tucson), and others have continued to reveal the outstanding health benefits of breath work practices.

VII. RESOURCES

A. BOOKS/PERIODICALS

Ballentine, R. (1999). *Radical healing.* New York: Three Rivers.
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Farhi, D. *(1996). The breathing book.* New York: Holt.
Grof, S. (1988). *Adventure of self discovery.* New York: SUNY Press.
Hanh, T. N. (1990). *Present moment, wonderful moment.* Berkeley, CA: Parallax.
Hendricks, G., Ph.D. (1995). *Conscious breathing.* New York: Bantam.
Kelder, P. *(1989). Ancient secret of the fountain of youth.* Gig Harbor, WA: Harbor Press.
Khalsa, D. S., M.D. (2001). *Meditation as medicine.* New York: Pocket Books.
Levey, J. & M. (1991). *The fine arts of relaxation, concentration, and meditation.* Boston: Wisdom.
Lewis, D. (1997). *Tao of natural breathing.* San Francisco: Mountain Wind.
Nepo, M. (2000). *Book of awakening.* Berkeley, CA: Conari.
Small, J. (2001).*Psyche's seeds: The twelve sacred principles of soul-based psychology.* New York: Tarcher/Putnam.
Sultanoff B., & Klinger, R. (2000). *Putting out the fire ofaddiction.* Los Angeles: Keats.
Yoga Journal, Berkeley, CA. (800)600-YOGA; www.yogajournal.com.

B. AUDIO/VIDEO

Dances with Breath, a CD written/produced by Barry Sultanoff, MD, guides the listener through breathing practices with musical accompaniment, $16.95 (includes S&H)from Beautyacts©, 3700 Washington St., Kensington, MD 20895; Beautyacts@aol.com; www.humormatters.com/healingmatters.htm.

Instructional videos by Stephen Cope, *Kripalu Yoga Dynamic* and *Kripalu Yoga Gentle;* (888)399-1332.

Sounds True Recordings, Boulder, CO; (800)333-9185; www.soundstrue.com.

C. TREATMENT/RESEARCH CENTERS

Alzheimer's Prevention Foundation
Dharma Singh Khalsa, MD, Medical Director
2420 N. Pantano Road, Tucson AZ 857 15
(520)749-8374
www.meditation-as-medicine.com

Eupsychia Institute
Jacquelyn Small
P. O. Box 3090, Austin, TX 78746
(800)546-2795
www. eupsychia.com

Mind/Body Medical Institute
Herbert Benson, MD
New Deaconess Hospital
185 Pilgrim Rd., Boston, MA
(617)632-9530

VIII. REFERENCES

Benson, H., *et al.* (1974). The relaxation response. *Psychiatry,* 37, 37-46.

Goleman, D. (Ed.). (1993). *Mind body medicine* (pp. 250, 256). Fairfield, OH: Consumer Reports Books.

Kabat-Zinn, J., *et al.* (1992). Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *American Journal of Psychiatry, 149,* 936-943.

Sultanoff B., & Klinger, R. (2000). A note on addiction. In *Putting out the fire of addiction* (vii-viii). Los Angeles: Keats.

Wallace, R. K., *et al.* (1971). *A* wakeful hypometabolic physiologic *state. American Journal of Physiology, 221,* 795-799.

Chapter 11

Therapeutic Touch

J. Ramita Bonadonna, PhD, **RN, CS**

I. MODALITY OVERVIEW

A. DEFINITIONS AND HISTORY

Therapeutic touch (TT) is the use of hands and intention to balance mind, body, and spirit in order to promote comfort and accelerate healing. Krieger (1979) called TT "a method of using the hands to direct human energies to help or heal someone who is ill." Macrae (1987, p. xi), a student of Krieger's, found that TT was "a way of acting as an instrument of healing," that is, TT practice stimulated "the integrating tendency within the individual". . . [TT] is a process that focuses on "balancing the energies of the total person rather than on the treatment of specific physical diseases."

The TT technique was developed in the early 1970s by Dora Kunz, then president of the American Theosophical Society, and Dolores Krieger, RN,

Handbook of Complementary and Alternative Therapies in Mental Health

PhD, a professor of nursing at New York University. Krieger and Kunz were part of a group observing a series of sessions conducted by Oskar Estebany whereby he used "laying on of hands" to treat people unknown to him for a wide variety of ailments. Kunz, a clairvoyant since birth, watched using her extraordinary powers of sensing. Krieger used more standard tools and strategies to measure and record blood pressure, pulse, and any other verbal or visible signs of change in the people treated. Outcomes of Estebany's sessions were impressive, and Kunz felt she understood the process well enough to teach it. She taught it to Krieger, who had moderate success right from the start. Krieger dreamed of nurses offering this to patients, labeled the process "therapeutic touch" (TT), and together Krieger and Kunz began teaching. In 1973, Krieger offered the first TT course for graduate nurses at New York University under the title "Frontiers of Nursing[7]" (Krieger, 1979). It was remarkably popular and continues to be taught there to this day.

B. PHILOSOPHY

Indian philosophy was used initially as the conceptual framework for TT. Krieger speculated that "prana" or vital energy was the medium transferred during the healing process (Krieger, 1979). Early TT researchers also used this framework (Heidt, 198 1; Krieger, Peper, & Ancoli, 1979; Quinn, 1984; Quinn, 1993a). Martha Rogers, a contemporary of Dolores Kneger and a colleague of hers on the faculty of New York University, published a new nursing theory called the Science of Unitary Human Beings (Rogers, 1970), and some practitioners (Buenting, 1993; Malinski, 1993; Miller, 1979; Samarel, 1997) and researchers (Biley, 1996; Meehan, 1993) cited this theory as the basis for TT.

There are four metaphysical assumptions underlying the practice of TT derived from the Science of Unitary Human Beings.

1. Energy

As stated by modern physics, matter and energy are on a continuum. Universal life energy surrounds, permeates, and sustains all living organisms. Rather than *having* energy fields, human beings *are* fields of energy and, as open systems, interpenetrate the universal field, constantly exchanging energy as part of one, open, living system.

2. Wholeness

The verb "to heal" comes from the Anglo-Saxon word *haelan,* which means "to make whole" (Macrae, 1987, p. 14), and the next basic assumption

is that wholeness is an innate tendency in all living things. Mind, body, and spirit naturally gravitate toward the integrity, order, pattern, and balance which characterize living systems. Healing is a natural human ability, and everyone has the potential to stimulate a healing response using TT.

3. Health and Disease

TT practitioners operate from an assumption that health is a balanced, even flow of energy within a person and between the person and the environment. Disease or illness, then, is a disruption or depletion of the energy flow, either within the individual or between the person and the environment.

4. Intention

TT is based on the assumption that intention directs the multidimensional flow of energy.' For the purposes of this practice, intention is the focusing of consciousness on a particular set of conditions in order to facilitate healing. The primary intention of TT practitioners is to be centered in the present moment and to be helpful to the person receiving TT.

C. CURRENT STATUS OF THERAPEUTIC TOUCH

Krieger has personally taught more than 48,000 health professionals to practice TT, and untold thousands, professionals and laypersons alike, have learned the process from her students. TT is practiced in 75 countries around the world (Krieger, 1998). TT is available in many hospitals and home care agencies in the United States, and is sometimes offered by clinical nurse specialists on a fee-for-service basis as part of advanced practice (NH-PAI, 2000b).

D. CONTROVERSIES REGARDING THERAPEUTIC TOUCH

It is not surprising that skepticism about TT exists; a questioning attitude is actively encouraged in people who are first introduced to the practice. Each is invited to see for themselves if there is "anything to" this strange-looking

'Robert Jahn, PhD, and colleagues working at the Princeton Engineering Anomalies Research (PEAR) Laboratories in Princeton, New Jersey, are studying mental influences on matter, specifically, random event generators. For a description of this fascinating series of experiments, see his *book Margins of Reality.* Larry Dossey, *MD,* has written several books and articles on "nonlocal awareness," including *Space, Time* and *Medicine* and *Healing Words.*

phenomenon. Rather than engage in a strictly intellectual discussion of metaphysical assumptions, those genuinely curious about TT are often taught a brief, simple exercise demonstrating the fact that "you do not stop at your skin" (see Section VI.A).

On a wider scale, skepticism regarding TT can be vigorous and coalesces around religious and scientific perspectives. Some find that the metaphysical assumptions upon which TT is based conflict with their religious beliefs (Fish, 1996) and have difficulty with the idea that healing can take place within a scientific rather than religious context (Wuthnow & Miller, 1987). They argue that only those who have a "legitimate" claim to spiritual authority can act as a healer, rather than ascribing to the belief that all humans have healing ability. Scientists, on one hand, criticize TT research as lacking in rigor, citing the absence of large-scale, randomized clinical trials to test efficacy (see Section IV). On the other hand, critics sometimes ignore clinical evidence supporting the practice and use questionable research methods in order to argue that TT is bogus, that professionals should not use TT, and federal funding should not be granted for TT research (Rosa, Rosa, Sarner, & Barrett, 1998). (Notably, due to the efforts of the National Center for Complementary and Alternative Medicine, this conundrum is resolving.) Skeptics have organized to discredit individual TT practitioners (often nurses), even going so far as to attack professional credentials and challenge state boards of nursing to officially restrict the practice.

II. RELEVANCE FOR MENTAL HEALTH

In the language of TT, health is defined as the balanced, even flow of vital energy within a person and between a person and their environment. No distinction is made between physical and mental health; the person is treated holistically. Mind and body are simply different densities or manifestations of a unified energy field.

TT is a highly personalized, highly sensitized human interaction, and Quinn (1989), an early student of Krieger's and one of the pioneer TT researchers, called healing a process of coming into "right relationship." Krieger (1998) described an increasing sense of "interiority" for the person receiving TT as well as the practitioner. Heidt's (1990) qualitative study of TT practitioners and the people they treated found that "openness" was the core concept that best described what it was like to practice and receive TT. For some, TT has the potential to stimulate transpersonal experiences. Clinical experience has shown that the TT practitioner and the person being treated often share

moments of awareness that are intuitive, extrasensory, and synchronous. Krieger taught husbands of pregnant woman to do TT on their wives and the unborn children, and the men reported feeling a greater bond to both their wives and their unborn children (Krieger, personal communication, 1985).

During and after receiving TT, people commonly report feelings of relaxation, lightness, tingling, or heaviness. A decrease in state anxiety, as measured by the Spielberger State Trait Anxiety Inventory, has been the outcome most consistently reported in the research literature.

The principles of centering, the first step in the TT process, are similar to the principles of mindfulness meditation, and this is the reason TT has been called "a healing meditation" (Krieger ***et al.,*** 1979; Sayer-Adams & Wright, 1995). Centering involves present moment awareness and letting go of thoughts of past and future. Clinical experience and research has shown a shift in time perception for TT recipients (Engle & Graney, 2000; Quinn & Strelkauskas, 1993) and seems to suggest that receiving TT can be a "centering" experience. "Whole" is another common descriptor, and people explain they feel "all of a piece" in a way that is new. Others say they feel "connected" to a larger sense of who they are, with an increase in spiritual awareness (Sneed, Olson, & Bonadonna, 1997). Centering itself is healing for the practitioner, and the long-term impact of TT on the practitioner is significant: one's worldview changes (Krieger, 1993).

III. SAFETY, COMPATIBILITY, AND CONTRAINDICATIONS

TT is considered safe, with few reports in the literature of adverse effects. Engle and Graney (2000) found that peripheral vasoconstriction was an immediate, short-term outcome of TT. Clinically, persons receiving TT sometimes complain of dizziness or mild headaches, but these symptoms generally pass quickly once the person lies down or once the session is completed. These side effects are the reason it is important that the person receiving TT feel comfortable voicing discomfort as soon as it becomes evident so the practitioner can terminate or adjust the session accordingly.

TT has been utilized to complement a vast array of medical therapies in a variety of settings for many different clinical problem (see Table I).

Ken Wilbur's books, *Spectrum of Consciousness* and *No Boundaries,* are excellent introductions to transpersonal psychology, the first being scholarly, the second a more popularized version of the same material.

Table I
Topics and Authors of Selected Clinical Reports and Research on Therapeutic Touch

Topic	Author(s)
Addictions	Hagemaster, 2000 Macrae, 1989
Anxiety	Gagne & Toye, 1994 Heidt, 1981 Olson & Sneed, 1995 Olson, Sneed, Bonadonna, Ratliff, & Dias, 1992 Olson ***et al.,*** 1997 Quinn, 1982
Alzheimer's disease	Griffin & Vitro, 1998 Simington & Laing, 1993
Critically ill	Apostle & McDonald, 1997 Bonadonna, 1993 Cox & Hayes, 1998 Turner, Clark, Gauthier, & Williams, 1998
Children	France & Quinn, 1992 Ireland, 1998 Ireland & Olson, 2000 Kramer, 1990 Quinn, 1993c
Elders	Peck, 1998 Quinn, 1992 Rowlands, 1984
Hospice and palliative care	Glasson, 1996 Messenger & Roberts, 1994 Newshan, 1989 Snyder, 1997
Mental health nursing	Hill & Olive, 1993 Hughes, Meize-Grochowski, & Harris, 1996
Oncology	Caudell, 1996 Glasson & Bouchard, 1998 Kotora, 1997 Samarel, 1997
Osteoarthritis	Evanoff & Newton, 1999 Gordon, Merenstein, D'Amico, & Hudgens, 1998

(continued)

Table I (continued)
Topics and Authors of Selected Clinical Reports and Research on Therapeutic Touch

Topic	Author(s)
Pain	Apostle & McDonald, 1997
Phantom pain	Biley, 1996 Leskowitz, 2000
Physical rehabilitation	Payne, 1989
Pregnancy and birth	Buenting, 1993 Houston, Valentine, Glasson, Bouchard, 1998
Primary care	Wytias, 1994
Respiratory therapy	Haines, 1995
Sleep	Braun, Layton, & Braun, 1986 Dall, 1993
Surgery	Jonasen. 1994
Tension headache	Keller & Bzdek, 1986 MacNeil, 1996
Wound healing	Daley, 1997 Finch, 1997 Kenosian, 1995 Wirth, Richardson, & Eidelman, 1996

There are no specific contraindications to offering TT, but several cautions designed for novice TT practitioners who may attempt to help people with complex problems. For example, premature infants, the elderly, or those with terminal illness seem to respond quickly to TT, and may therefore be more vulnerable to side effects. The guideline here is to make sessions short (D. Krieger, personal communication, summer, 1985). For people with a fragile sense of self, such as those with severely disordered personalities or psychotic disorders, transpersonal experiences may be difficult to integrate. Rather than doing a complete TT session, the approach suggested in these situations is for the practitioner to center and gently project, using intention and visualization, qualities of peace and compassion toward the person (D. Kunz, personal communication, Summer, 1985).

IV. RESEARCH AND SCIENTIFIC DOCUMENTATION

Soon after the National Institutes of Health established the study of complementary and alternative medicine as a national priority, experts at the National Center for Complementary and Alternative Medicine determined that TT had one of the most extensive research bases of any of the alternative1 complementary modalities (NH-PAI, 2000b).

Authors of a recent integrative review and meta-analysis of TT research (Winstead-Fry & Kijek, 1999) found that there is tremendous diversity in approaches to TT research. Sample sizes are often small and few studies can be replicated because samples are insufficiently described. Some investigators do not use the Krieger-Kunz definition of TT. Of the 29 TT studies reviewed that tested efficacy, 19 demonstrated at least partial support for their hypotheses and 10 rejected theirs. The effect of TT on reducing anxiety is one of the most validated findings in the literature, yet caution should be used when generalizing about efficacy (Winstead-Fry & Kijek, 1999). Research into the use of TT with children has been inconclusive (Ireland & Olson, 2000), therefore further research on the modality is clearly indicated. A frequently updated bibliography of literature on TT is available from Nurse Healers-Professional Associates, Inc. (NH-PAI, 2000a).

V. THE PROCESS OF THERAPEUTIC TOUCH

TT is typically done with the person receiving the session fully clothed and seated and the practitioner standing, although many hospitalized patients are treated in bed under linens. The practitioner orients the person new to TT with a general introduction, explaining that the hands will move over the body a few inches away and that light touch might be used, but that TT is not a massage. If the person receiving treatment wants to know what to do or to expect, the practitioner can encourage an open mind, an attitude of curiosity about the experience as it proceeds, and can explain that common outcomes include relaxation or diminished discomfort. There is no need for the recipient to hold any belief about TT, energy fields, or any other metaphysical assumption. Persons receiving TT are encouraged to inform the practitioner immediately if they experience anything they find uncomfortable rather than wait for the session to be over. This enables the practitioner to directly address concerns or to terminate the session if that seems wise.

TT is described as having four steps: Centering, assessment, intervention, and evaluation/closure (NH-PAI, 2000b). This description is useful for teaching purposes but it can be misleading, for the process is nonlinear and actual

practice necessitates the practitioner to shift from one "mode" to another and back again during a single treatment.

A. CENTERING

The first step of TT is not visible: It entails moving into a quiet, focused state of consciousness. To become centered means to shift one's attention from the external environment to one's "interiority[7]' (Krieger, 1998). Centering involves letting go of thoughts about the past and the future and bringing all of one's attention to bear on what is happening in the present moment. The ability to achieve and maintain a centered state develops and deepens with practice; therefore, practitioners monitor their state of consciousness frequently during a session and recenter when necessary.

Many strategies are used for centering. Focusing on breathing in and breathing out with conscious awareness can be centering. One can repeat a word or mantra-such as "peace[m]-to become focused within, or conjure an image in the mind's eye that represents wholeness for the practitioner, such as a tree or a flower.

Closely aligned with centering is grounding, or acknowledging one's connection with some source of energy greater than the individual practitioner, whether Nature, Higher Power, God, Universal Energy or some other conceptualization. This aspect is important for reminding practitioners that they are not the source of the healing energy, but a conduit.

Once in a healing state of consciousness with the spiritual connection acknowledged, practitioners formulate a conscious intention to help the person receiving TT. Some silently recite a meaningful phrase to signify their intent to work for the person's greatest good. Others visualize themselves and the person receiving TT smiling and surrounded by love.

B. ASSESSMENT

Assessing the energy field has two dimensions: physical activity and an activity of consciousness. Assessment is performed by moving the hands slowly over the person's body from head to toe, front and back, scanning the space about 2-6 inches from the skin. Hands generally are symmetrical (side by side or front and back) and move rhythmically and consistently, taking only several seconds to complete the assessment. The practitioner's consciousness, meanwhile, is tuned to an open, receptive mode. That is, the hands are used like antennae to "listen" carefully for subtle "signals" as they move through the space over the body. Perceptual cues can come to the practitioner

in many ways, the most common being sensations of heat, coolness, pulling or thickness, tingling, or pulsing in the palms (Krieger, 1979).

These cues indicate where energy is blocked, depleted, or congested, and the physical proximity of these cues to a location on the physical body may or may not have anything to do with what the person receiving TT perceives as the "problem." The work of assessment is to pick up these clues and use them later to formulate how energy should be directed. As with centering, the sensitivity of the practitioner to assessment cues develops with practice.

C. INTERVENTION

This step entails clearing (also called "unruffling"), mobilizing, directing, and balancing energy. At this stage the physical actions of the practitioner are very similar to the movements during the assessment phase; that is, the hands sweep slowly and steadily a few inches above the body from head to toe, front and back, with long, smoothing strokes. What differs is the practitioner's consciousness. While clearing, the intent is to soothe, to relax, and to instill a sense of peacefulness and receptivity in the person being treated. The person receiving TT often experiences this as deeply relaxing. Mobilizing and directing energy entails placing hands on or near the locations that seemed to generate cues for the practitioner during the assessment, and the hands may remain in one position for minutes at a time, sometimes making physical contact. Practitioners recall the cues from the assessment, conceptualize a reciprocal quality, and use intention and mental imagery to project that reciprocal quality toward the area found during the assessment to be disrupted. For example, if "stickiness" or "stagnation" was the label for the assessment cue, "flowing" might be the concept used to mobilize energy, or an area perceived as hot might need cooling directed toward that spot. Consciousness shifts from "listening" and assessing to "soothing" to "integrating" and back again. Balancing the energy field entails projecting, directing, and modulating energy with the intention of reestablishing order in the system (NH-PAI, 2000b).

D. EVALUATION/CLOSURE

Finishing the TT session entails using professional, informed, and intuitive judgment. Continuously reassessing the quality of balance in the field and eliciting feedback from the person receiving TT generate important indicators of when the session is complete (NH-PAI, 2000b). While not a formal step in the process, sessions often end with the practitioner "grounding" the

person receiving TT by physically placing one hand on each foot and visualizing the person solidly connected to the earth. Sessions generally last approximately 20 minutes, and the person who has received TT is asked to lie down for several minutes afterward.

Case Study 1

A neighbor, a **3** 1-year-old artist, knowing of my nursing background and interest in TT, asked if TT might make a difference with his peripheral neuropathies. He had had diabetes since early adolescence and the pain and numbness in his hands and feet had worsened recently. It was getting difficult for him to climb stairs and to use his sculpting tools, and he feared his livelihood would be affected. I told him we could try a session and see what happened.

I asked him to let me know if anything during the treatment felt odd or uncomfortable, reminding him that while we would not be having a conversation, TT was not a magic spell that would be broken by speech. He sat on a stool and I stood behind him, my hands resting on his shoulders, and closed my eyes. I centered by taking a few deep breaths, visualized energy moving through me and into the ground, and formed a mental intention to help this man.

Assessing the field, I sensed congestion around his head and shoulders, heat near the heart, and coolness and stagnation from his forearms to fingertips and from below the knees to his feet. As I cleared the field, his breathing pattern deepened and slowed and his shoulders and head drooped forward slightly. I smoothed the congestion down and away from his head and upper body, trying to distribute it uniformly throughout the field. I held each elbow in turn and projected warmth through the forearm and into the hand and fingers, using my other hand to stroke and direct the energy flow until warmth replaced the coolness. I did the same with his legs: one hand on the knee, one on the arch of the foot, my eyes closed and visualizing a warm wave of energy moving downward into his feet and out into the ground. When both feet felt warm to me, I returned to the top of his head and assessed the field, projecting balance. I perceived a fine tingling in the area around his head, and this quality was consistent and symmetrical throughout the field, with warmth remaining near his heart. I placed one hand in the space in front of his heart and one hand behind his back, closed my eyes, and projected an image of a blue stream of water and the qualities of peace and serenity.

As I remained in that position, he sat up slowly and straightened his posture. His eyes were closed, and I saw tears and a gentle smile on his face. I asked how he was doing, and he silently nodded his head. I reassessed the field, found no areas of disruption remained, and spent a minute sitting at his feet, holding one arch in each hand and visualizing him connected to the

earth, walking on the grass, smiling and glowing with health and vitality. I told him the session was finished and helped him move to a couch where he dozed for several minutes.

Afterward, he reported feeling deeply relaxed and that both his hands and feet felt warm to him, a rare thing in his condition. What most impressed him about the experience, though, was that near the end of the session he'd gotten an image of his deceased grandmother. She was the person he felt most loved by in the world, and he felt like "an ocean of her love" surrounded him. He said he knew "everything will be alright."

After several more sessions, this man was motivated to learn TT, began treating himself and others, and reported significant improvement in his neuropathies. Years later he underwent laser surgery for diabetic retinopathy, continued practicing and receiving TT, and his surgeon was impressed with his rapid healing.

Case Study 2

A pediatric staff nurse asked for psychiatric nursing consultation regarding a 12-year-old boy who, while playing near a trash fire in his yard, sustained second- and third-degree burns to *35%* of his body, mainly on the trunk and extremities. The nurse said the boy became extremely anxious and agitated when any effort was made to move him or handle his bulky dressings, and he panicked if his mother left the room. The boy's anxiety was increasing, interfering with his sleep and participation in treatment.

When I arrived on the unit and reviewed the chart, I saw that the patient was requiring large amounts of narcotic and anxiolytic medications, yet pain and anxiety were poorly controlled. Talking to his nurse, I was told "the boy gets himself all worked up," that "his mother doesn't help the situation," and that the boy's mother and stepfather were in the patient's room now.

When I entered the room, the patient appeared tense and uncomfortable. I introduced myself and told him why I had come. He closed his eyes while I spoke but assured me he was still listening. When I asked him questions, he spoke in a very soft voice. The boy appeared younger than 12 and looked helpless, lying in the bed, head elevated, with bulky dressings on arms, hands, legs, and torso, which rendered him immobile. The boy's mother was standing over the patient's bed, and his stepfather was sitting in a chair, a few feet from the bed.

I introduced the idea of pain and anxiety being related, and that I had something that might help with both: therapeutic touch. After a brief description, the boy looked hesitant, and when I again stated that he could stop me at any time, and that I didn't have to really touch him at all, he agreed to try a sample. The predominant cues I picked up during the assessment were heat and a prickling sensation, with areas of tightness over the shoulders and abdomen.

I centered myself again and began visualizing the color blue, imagining I was painting the area over his body, sweeping my hands down from his head and outward from the midline. I continued this motion over his torso, arms, and legs. After a few minutes, with his eyes closed, he said, "It feels like cool water pouring all over my body!" and the tension that had been so visible began to leave his face. I ended the session, briefly picturing him smiling, running, and playing with friends. As the boy rested, I answered his parents' questions and offered additional sessions, if desired, and said I would check in with them the next day.

When I returned, the patient was looking forward to a session of TT. Assessment showed the field was dense around the torso with little energy in the arms and legs. I focused on dispersing the energy, smoothing it, and spreading it evenly, intending balance and symmetry. As I finished and grounded him, he said TT felt "like a cool wind today." Afterward, he dozed off with a smile on his face.

When he awoke, he spoke about the nightmares he'd been having since the accident and how frightened he'd been by the treatments and the pain. He expressed how guilty he'd felt for playing near the fire when he "knew better." He received two more TT sessions on the following 2 days and no longer needed anxiolytics. His nightmares decreased and his sleep improved. He gradually required less pain medication, and began to participate in therapeutic activities.

VI. TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

Because of its development within the nursing community, 'T is practiced primarily within the nursing profession. TT is considered a natural human potential, however, and is therefore available to anyone who chooses to learn the process and develop the skill. Fundamental requirements for TT practitioners are compassion, the willingness to learn the process and do essential "inner work," and to continually evaluate why one wants to be a healer (NH-PAI, 2000b).

Interestingly, and fortunately for novices, acute perceptual sensitivity during the assessment phase is not a prerequisite for delivering an effective TT session. As long as the practitioner centers and intends to help, the physical movements of assessment, clearing, and mobilizing energy along with the intention to soothe, balance, and integrate are often enough to stimulate a relaxation response in the person receiving TT (Quinn, 1993b).

While there is no certification process for TT practitioners, the official TT organization, Nurse Healers-Professional Associates International (NH-PAI), has clear recommendations for responsible TT practice. First, the basic

course in TT should be a minimum of 12 hours in length, with additional time devoted to development of clinical skills. Second, in order to become a qualified TT practitioner in a health care setting, an additional 12-month mentorship and an intermediate level TT workshop are necessary. Third, experienced practitioners should take advanced workshops and participate in regular TT updates. To be recognized by NH-PAI as a TT teacher, one needs to have practiced TT regularly for *5* years, had mentorship both as a practitioner and as a teacher, and attended at least two advanced TT workshops. NH-PAI maintains an up-to-date TT bibliography; a list of facilities where TT is practiced; a statement of ethics, standards of care, and scope of practice for TT; guidelines for TT teachers and mentors; and policies and procedures for practicing TT in a medical setting (NH-PAI, 2000b).

The term "therapeutic touch is sometimes confused with the Healing Touch Program (Wardell & Mentgen, 1999), which includes a variety of interventions and techniques, including a few hours on TT. NH-PAI does not endorse the Healing Touch Program as a suitable source of training for TT practitioners.

A. EXPERIENCING THE ENERGY FIELD

1. Become aware of your hands. Stretch them, rub them, look at them closely. Consider the ways your hands serve you.
2. Sit comfortably with both feet on the ground. Place your hands so the palms face each other in front of your chest, holding your elbows slightly away from the body. Now bring your palms as close together as you can without having them touch, perhaps 1/8 to 1/4 inch apart.
3. Separate the palms of your hands by about 2 inches and then slowly bring them back to their original position.
4. Now separate your palms by about 4 inches and, again, slowly bring them back to their original position.
5. Repeat this procedure, this time separating your palms by about *6* inches. Keep your motions slow and steady. Notice if you begin to feel a buildup of pressure between your hands or any other significant sensations.
6. Once again, separate your palms, this time until they are about 8 inches apart. Do not immediately return your hands to their original position. Instead, experiment with the space between your palms. Stop every inch or two to check what you might sense about this space. "Bounce" the space gently to notice any resistance. Pay close attention when you move your hands apart as well as when you move them together. You might try moving one hand away completely and "bounce" in toward the floor or a table, then return it to face your other palm. Notice any differences.

7. Spend the next minute or so experiencing this "field" between your hands and try to determine what other characteristics or qualities you notice. (Revised from Krieger, 1979.)

VII. RESOURCES

Nurse Healers Professional Associates, Inc.
"The Official Organization of Therapeutic Touch"
3760 South Highland Drive Suite 429
Salt Lake City, UT 84106
Phone: (801) 273-3399
Fax: (801) 273-3352
nhpai@therapeutic-touch.org
http://www.therapeutic-touch.org

American Holistic Nurses Association
Post Office Box 2130
Flagstaff, AZ 86003-2130
Phone: (800) 278-2462
http://www.ahna.org

Healing Touch International
http://www.healingtouch.net
Phone: (303) 989-7982

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Chapter 12

Spiritual Healing

Daniel J. Benor, **MD**

Handbook of Complementary and Alternative Therapies in Mental Health

I. OVERVIEW

A. INTRODUCTION

Spiritual healing (abbreviated in this chapter as healing) is probably the oldest known treatment. It has been practiced in virtually every culture in every part of the world, throughout recorded history. In traditional cultures, it is administered by shamans and medicine men and is very much a part of the fabric of the culture. In the Western world, material interventions have been emphasized by conventional medicine, and healing has been viewed with great skepticism. Most physicians believe (as I, myself, did) that this could be no more than a suggestion or placebo effect. Recent research suggests there is as solid a basis for accepting healing as a legitimate and potent treatment intervention.

Spiritual healing is defined (Benor, 2001a, 2001b) as "a systematic, purposeful intervention by one or more persons aiming to help another living being (person, animal, plant, or other living system) by means of focused intention, hand contact, or passes to improve their condition. Spiritual healing is brought about without the use of conventional energetic, mechanical, or chemical interventions. Some healers attribute spiritual healing effects to God, Christ, other "higher powers," spirits, universal or cosmic forces or energies, biological healing energies or forces residing in the healer, psychokinesis (mind over matter), or self-healing powers or energies latent in the healee. Psychological interventions are inevitably part of healing, but spiritual healing adds many dimensions to interpersonal factors."

Laying-on of hands treatments may last 15-60 minutes and are commonly given at weekly intervals. Distant healing may be sent as a mental intent, meditation, or prayer by an individual or a group of healers. Healing may be given more often for acute or severe problems, less often as conditions improve.

B. VARIETIES OF HEALING

Healing is given in many ways, under many names, through various traditions and schools. A few varieties are given below.

1. **Therapeutic Touch** (TT)

TT was developed by Dolores Krieger, PhD, RN, dean of Nursing at New York University, along with Dora Kunz, a gifted, intuitive healer (Krieger

1979,1993). It is practiced by hundreds of thousands of nurses, other health caregivers, and laypersons worldwide. TT is given with a laying-on of hands, practitioners very lightly touching the body or holding their hands near to but not touching the body. Mental imagery may be projected by healers to focus and direct the flows of healing energies through their hands or within healees' bodies.

2. Reiki

Reiki is derived from Japanese healing traditions, practiced by hundreds of thousands of lay and professional healers worldwide (Barnett, 1996; Rand, 1998). It may be given through a laying-on of hands, or may be sent as a wish/prayer from any distance. Healers hold the intent that whatever energy exchanges or transformations are needed should occur under the direction of a *higher intelligence.*

3. Qigong

Qigong healing, of Chinese origins, encourages the healee to practice meditation, gentle physical exercises, and imagery of shifting healing energies within their own bodies and in relationship to their environment. Qigong masters give healing as *external qi* (Cohen, 1997,2000).

4 Prayer

Prayer healing is practiced universally, with uncounted millions of laypersons, clergy, and growing numbers of health caregivers sending healing to those in need (Randall-May, 1999). Many prayer healers believe healing is granted through a religious figure or by the God to whom they address their prayers. Some prayer healers feel that healing is effective only when sins are repented, and when sent by anyone outside of their own church it is suspect of being the work of the devil.

C. HEALING TREATMENTS

There are no standard treatment effects with healing. Healing has been reported to alleviate almost every known symptom and illness in some people, some of the time. Various practitioners may elicit different responses in the same healee, and the same healer may find the same healee responding differently from one treatment to the next. Some healers are particularly

successful with given illnesses but may have no response when treating other problems. Some healers have told me that diabetes mellitus does not respond to healing, while other healers report that diabetes responds regularly to their treatments. This unpredictability of treatment response has contributed to skepticism about the benefits of healing. Anyone working with healers should seriously consider consulting one or more opinions and therapists if no responses are obtained after a few treatments (Benor, 2001a).

The gifts of healing may arrive in many types of vessels. Most healers are warm, intuitive, supportive caregivers. However, I have known very successful healers who had quite limited social skills or were even gruff, lacking in emotional intelligence, and very self-seeking.

Healing is most often a holistic, global intervention rather than a treatment for specific problems. Many healers direct their treatments to the whole person. It is not uncommon for someone to come for healing-for instance, of an infection-and to find that there was only a limited improvement in their presenting problem, but a major response in another problem that was not even mentioned to the healer.

Healers and healees often report they experience heat, tingling, vibration, electrical sensations, or cold during treatments. These sensations suggest that an exchange of energy is occurring between the two. However, no conventional energies have been identified that correspond to these sensations.

The term ***spiritual*** healing derives from spiritual awarenesses that may spontaneously arise in healees and healers during treatment. These may include a deep sense of peace, acceptance, and unconditional love; awareness of being a part of a collective consciousness; feeling one with nature, a religious figure such as Christ, or God.

II. RELEVANCE FOR MENTAL HEALTH

A. HEALING IS AN EXCELLENT COMPLEMENT TO MOST FORMS OF COUNSELING AND PSYCHOTHERAPY (BENOR, 1994, 1996)

During healing, memories may surface of physical or emotional traumas that contributed to current problems, bringing about a cure for the symptoms. John suffered severe neck pains for over a year, following an auto accident in which he was rear-ended at a stop sign. No physical cause could be identified that would account for the persistence and severity of his symptoms. Pain

medications, muscle relaxants, and massage gave little relief, and side effects of medications were troublesome. He obtained the greatest relief in wearing a neck brace, though again there appeared no adequate justification for this. In his first healing treatment, John was startled to recall how frightened he had been at age 7 when his father, an otherwise hale, hearty, and loving man, had had a severe auto accident and came home with his leg in a cast and wearing a neck brace. From that day forward, he suffered severe neck pain and headaches, was irritable, and no longer cuddled John or played with him. Psychotherapy helped John understand the buried childhood hurts-of his father's essentially having abandoned him-that had been awakened by the injury and by wearing a neck brace. Further healing helped him relax his tense neck muscles and relinquish his pain.

B. HEALING MAY RELEASE EMOTIONAL CONFLICTS THAT THEN REQUIRE SORTING OUT IN PSYCHOTHERAPY

Donna, a 35-year-old nurse, came for healing of a backache that had not responded for over 2 years to physiotherapy, pain medications, diazepam, and muscle relaxants. Chiropractic treatment provided relief that lasted 1 or 2 days but the pain always recurred. In her second healing session, Donna recalled a period of repeated sexual abuse at age 7 by an uncle. The pain was markedly reduced following this session, but several months of psychotherapy was required for Donna to work through her feelings of anger and betrayal and to deal with the revelation of these experiences to her family.

C. THE OPPOSITE MAY EQUALLY OCCUR

In counseling, intense emotions may be released. Healing can help people to tolerate intense emotions more readily.

Sam had a severe post-traumatic stress disorder (PTSD) from Vietnam War experiences where he had participated in brutal jungle warfare. Brief engagements with various forms of psychotherapy over two decades did not diminish his night terrors, panic attacks, and disabling headaches. He repeatedly left therapy because his symptoms began to worsen after one or two sessions. When healing was introduced, along with self-healing techniques that helped Sam control the anxieties released by therapy, he was able to persist in treatment and obtained marked relief of most of his symptoms.

D. HEALING MAY HELP TO RESOLVE RELATIONAL PROBLEMS

The effect of healing on relationships may occur spontaneously or when relationships become a focus for the treatment. Healing is limited only by the beliefs, disbeliefs, and intents of the healers and healees. The following is an unusual, but not uncommon, example of this class of effects.

Lorna left home and school when she was 16, lying about her age to obtain work as a waitress. She could not stand to live with the constant bickering and arguments of her alcoholic father and her bitter, long-suffering mother. She was further embittered by a marriage that ended with separation and an acrimonious divorce due to her husband's drinking. Left unsupported with two young children, she struggled for several years to survive. She was plagued by endometriosis, which eventually led her to receive healing. She was surprised to find that the healing not only relieved her physical pains, but also brought about heavy sobbing, with releases of feelings of abandonment by her husband and of neglect and emotional abuse by her parents. Her pains recurred several times during the course of treatment, each time preceding an emotional release. Though she released much of her angers and resentments toward her parents, with whom she had kept contact only through a token Christmas card for over 10 years, she was in no way inclined to contact them again. Two days after her last emotional release of angers toward her parents, as she was working on termination of therapy, she was utterly surprised to receive a call from her mother telling her that her parents were separating and that her mother, contrite over having not been available to her in childhood, wanted to reestablish their relationship.

While this may sound like a mere coincidence, it is not unusual to find healing unexpectedly improving relationships, even when this was not a primary focus in the presenting symptoms. The fact that such shifts occur not infrequently in relationships without physical and social contact is further evidence suggesting the action of healing through nonlocal consciousness (discussed later).

E. SOME HEALERS HAVE GIFTS OF EXTRASENSORY PERCEPTION (ESP)

Healers may perceive deeply meaningful experiences of a healee from many years earlier. Such experiences may contribute significantly to the healing. They may also address memories as bioenergetic entities within the person that they can heal, just as they might heal a disorder of functions in the physical body.

Tom, a 42-year-old, twice-divorced father of three, suffered from severe, chronic, recurrent depressions that had not responded well to a wide variety of antidepressants or to several years of psychotherapy with two therapists. Electroshock therapy had been recommended but he refused. In his first healing, the healer reported an intuitive awareness that Tom's mother had felt she had to marry his father because she was pregnant. She deeply resented the pregnancy and did not want the marriage, but her religious beliefs and family pressures left her feeling she had little choice. The healer addressed these issues both cognitively and energetically with Tom. Within a few weeks, his depression was markedly improved.

F. HEALING MAY AWAKEN INTUITIVE, SPIRITUAL, AND HEALING AWARENESSES AND ABILITIES IN HEALEES

Wise healers will encourage healees to connect with these aspects of themselves - often ignored, neglected, or even dismissed and disparaged in Western society. It is commonly estimated that only 5% of the capacity of the brain is available to the conscious mind. Intuition extends our awareness into this rich, untapped resource of repressed memories and creativity.

Intuition also reaches beyond the individual into what is commonly termed a "higher self." This is a nonphysical, nonlocal aspect of consciousness where psychic and spiritual awarenesses can be accessed. Healers often have intuitive gifts that help them assess the types and severity of presenting problems. They simply know, with an inner awareness, what is wrong and how to address this through bioenergy treatments.

For use in medical practice, intuition is a gift that requires experience, refinement, and thoughtful balance. I learned a lot from a pilot study in which I explored the degree of congruence of the intuitive diagnostic assessments of a panel of eight healers who simultaneously observed the same patients (Benor, 1992; 2001a, 2001b). These healers made their assessments through visual perceptions of the *aura* (the bioenergy field) around the patients. Each healer drew the colors perceived and wrote down their interpretations of these colors. Each then gave their interpretation of their perceptions to the patient.

No one was more surprised than the healers when they found their perceptions were like those of the blind men examining an elephant. Each appeared to be describing an entirely different patient. The second surprise came when the patients were asked for feedback and reported that seven out of the eight intuitive readings were relevant to their conditions. (The eighth

healer was found by all patients to be describing depression, which was not present.)

It was as though each were looking into the same house through a different window. My understanding of these findings is that each healer resonated with a different aspect of the patient's biofield. The eighth healer seemed to be projecting his own depressed emotional state on the patients. This is a caution for anyone engaged in healing. Healers may resonate with only part of the presenting problem(s) and may be blind to others.

G. MY PERSONAL EXPERIENCE IN DEVELOPING MY OWN HEALING GIFTS

Spiritual awareness that accompanies giving and receiving healing has given me perspectives that are deeply meaningful and helpful to me in dealing with my personal and professional relationships. The practice of medicine and psychiatry under managed care can be soul-destroying. There are constant pressures to be efficient within constraints of time, budgets, and the regulations of treatment settings, insurance companies, and governmental authorities. Being aware of a broader, spiritual connection introduces a sense of meaningfulness and purpose in life, even when I do not have words to adequately explain or even to articulate how I know this or what the purpose of these frustrating and depressing situations might be. It also reconnects me with my original intention for becoming a physician and psychiatrist: to help people who are suffering from disease and dis-ease.

In my practice of psychotherapy combined with spiritual awareness and healing, I explore these dimensions with clients and encourage them to find their own spiritual awarenesses and meanings for their existence. Problems take on a much less onerous proportion from such a perspective. Spiritual dimensions also introduce elements of intuition and creativity that help us to understand, deal with, and resolve problems.

H. THE PERSONAL GROWTH AND DEVELOPMENT OF THE THERAPIST IS VITAL TO THE PROCESS OF HEALING

In healing, perhaps more than in most other therapies, the person who is the healer is the instrument for the treatment. No mechanical, chemical, or social intervention can adequately account for many of the problems successfully resolved by healers.

III. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

A. SAFETY

There are no known deleterious effects of healing. Some people experience mild to moderate worsening of symptoms following their initial treatments. This is considered a positive prognostic sign, as it appears to represent a release of blocked energies, along with physical and emotional tensions.

B. COMPATIBILITY WITH CONVENTIONAL CARE

Healing is an excellent complement to many other therapies. Practitioners of massage, aroma therapy, shiatsu, reflexology, and the like may notice that their hands feel unusually hot during treatments. Many don't even realize that in addition to their physical manipulations, spiritual healing is also occurring spontaneously (Benor, 1995). When this occurs, patients often report that their treatment felt particularly helpful.

Healing may markedly diminish side effects of medications. Sue, a British nurse, is a strong healer in an oncology unit. Her supervisor would not agree to her offering healing to the cancer patients because she felt healing that was not done in her church was suspect of being evil. As Britain has no Bill of Rights, and Sue did not wish to alienate her boss, she reluctantly did not press the issue. Frustrated, she meditated and prayed for inspiration. She was pleased when she was intuitively guided to give healing to her patients' chemotherapy IV bottles. Her patients then had little or no nausea, vomiting, diarrhea, headaches, or other side effects from the chemotherapy. Other nurses, including her supervisor, noticed this and suspected she was not administering the medications correctly, but could find no such fault when they supervised her treatments.

Some healers regularly produce dramatically positive effects. They may note that people with diabetes need less insulin following healing. They have learned to caution diabetics and the doctors they work with that they may be at risk for insulin shock if they continue on their usual insulin dose. Some healers caution that healing may lessen the effects of cancer chemotherapy and radiotherapy, as they believe healing strengthens the immune system. While there is early evidence to suggest healing can enhance immune system functions, I know of no evidence to support these cautions with cancer patients.

C. CONTRAINDICATIONS

There are no medical contraindications to healing. Some patients object to healing, either categorically or as offered within particular healing traditions. Healing should not be given instead of ongoing conventional medical care without the consultation of a physician. Patients using insulin or steroids have occasionally suffered the effects of injudiciously stopping treatment in the belief that they were healed.

IV. RESEARCH/EXPERIENCE AND THE LEVEL OF SCIENTIFIC DOCUMENTATION

A. OVERVIEW OF RESEARCH

Out of 191 randomized, controlled studies of healing, 124 demonstrate significant effects that exceed a probability of 0.05 or better (Benor, 2001a, 2001b). Until recently, medical journals routinely rejected studies and articles on healing, and most healing studies had to be published in parapsychology journals. Fortunately, this is changing. In the past dozen years, some of the most impressive studies were published in respected medical journals.

For example, Randolph C. Byrd (1988) explored intercessory prayer in a coronary care unit (CCU). This double-blind study included 192 patients randomized to the prayer group and 201 to the control group. "There were no differences between groups on admission in degree of severity of myocardial infarction or in numerous other pertinent variables."[1] The experimental group received prayer sent by Christians praying many miles from the hospital. The prayer group scored significantly lower ($p < 0.01$) than the control group on a scale for severity of problems devised by Byrd. "Significantly fewer patients in the prayer group needed intubation/ventilation ($p < 0.002$) or antibiotics ($p < 0.005$), had cardiopulmonary arrests ($p < 0.02$), developed pneumonia ($p < 0.03$), or required diuretics ($p < 0.05$)." However, "the mean times in CCU and durations of hospitalization between groups were nearly identical." The results might be more significant than they appear because, as Byrd noted, some of the patients in the control group may have had outsiders praying for them, which presumably would have reduced the differences between groups.

William Harris ***et*** al. (1999) replicated Byrd's study in another randomized, controiied, double-blind, parallel-group trial of 990 consecutively

[1] Quotes are from Benor (2000a, 2000b)

admitted patients on a CCU. "There were 466 in the prayer group and 524 in the control group. No significant differences were noted in age, sex or in cornorbid conditions between the groups." Informed consent was not obtained; and neither patients nor staff knew this study was being conducted. Prayers were sent in the 28 days following admission, covering the patients' entire hospitalization in 95% of the cases.

The researchers developed their own assessment scale because no standard scales exist for assessment of CCU cardiac status or progress. The prayer group showed significantly more overall improvement than the control group ($p < 0.04$). No significant differences between groups were evident on the scale devised by Byrd, although there was a trend in favor of the prayer group. Again, no significant differences were noted by Harris *et* al. between the two groups in length of hospital stay.

Fred Sicher *et* al. (1998) arranged a randomized, double-blind trial of distant healing on 40 volunteers (37 men, 3 women) who had advanced AIDS. They were classified in category C-3, including CD4+ cell counts of less than 200 cells, a history of at least one AIDS-defining disease, and taking prophylactic treatment against Pneumococcus carinii. "Volunteers were solicited through local advertisements. Diagnoses were confirmed by standard criteria for HIV+ disease. Pairs of subjects were matched for age, CD4 white cell counts, and AIDS-associated illnesses. They were randomly assigned to receive either distant healing or no healing. All received standard medical care from their own doctors, at several different medical centers." The treatment and control groups did not differ significantly on demographic and study variables prior to the start of healing.

Distant healing was sent for 10 weeks by 40 healers in various parts of the United States. There was never any contact whatsoever between healers and patients. "Patients and doctors were blind to who received the healing and to when the healing was sent" (Sicher, *et* al.). Assessment of severity of illness was also done on a blinded basis.

At 6 months following the initial assessment, the prayer group "had significantly fewer AIDS-related illnesses ($p < 0.04$) and lower severity of illnesses ($p < 0.02$). Visits to doctors were less frequent ($p < 0.01$), as were hospitalizations ($p < 0.04$), and days in hospital ($p < 0.04$)" (Sicher *et* al.).

Mood, assessed on the Profile of Mood States scale, showed significantly more improvement in the prayer group ($p < 0.02$). CD4 counts and scores on the other psychological tests did not differ significantly between the two groups.

The authors pointed out that the overall improvements appeared to indicate "a global rather than a specific distant healing effect" (Sicher, *et* al.).

They suggested that measures of viral load and activity of natural killer (NK) cells may be more useful measures of healing effects than CD4+ counts.

Although treatments were given by different doctors in different medical centers, an accepted current standard of treatment was presumably followed. This factor was not examined by the authors of this study to verify that there were in fact no differences in treatments between the healing and control groups.

These are three of the best published healing studies. It is also of note that these were published in respected, conventional medical journals.

B. HEALING F OR ANXIETY

Of particular interest in this chapter are studies of healing for anxiety. Two classics in the healing literature are discussed next.

Patricia Heidt (1979, 1981) studied effects of therapeutic touch on anxiety in 90 patients hospitalized on a cardiac intensive care unit. "State anxiety was measured prior to and following the interventions given to each of three matched subgroups: (1) Five minute healings that were given with the hands touching the body; (2) five minutes of mimic healings ('casual touch'); or (3) no intervention." Subjects receiving therapeutic touch experienced a significant reduction in pre- vs. post-treatment state anxiety ($p < 0.001$) and had a significantly greater reduction in post-test anxiety scores compared to those in the casual touch or no touch groups ($p < 0.01$).

Other studies confirm that healing is helpful in treating anxiety in a general medical practice (Dixon, 1998); in premature neonates (Fedoruk, 1984); in hospitalized children (Kramer, 1990), in post-hurricane stress (Olson ***et*** *al*, 1992), in Veterans Administration psychiatric inpatients (Gagne & Toye, 1994), in oncology patients (Guerrero, 1985), in terminal cancer patients in palliative care (Kemp, 1994), in institutionalized elderly patients (Simington & Laing, 1993), and in unspecified subjects (Ferguson, 1986).

C. HEALING F OR DEPRESSION

Several studies have explored healing for depression. The most rigorous is that of C. Norman Shealy ***et*** al. (1993). This is also an interesting study because it examined the benefits of quartz crystals in focusing the self-healing abilities of depressed people, showing significant effects ($p < 0.001$).

A study by Catherine Leb (1996) explored the effects of six sessions of healing touch (HT) on chronic depression over **3** weeks. HT is an extension of TT, including longer sessions and focusing on the chakras (major bioenergy centers on the midline of the body). As part of the assessment, the healer used a pendulum to check the degree of openness, which is taken to be a measure of health, of the seven major chakras (energy centers on the midline of the body). The pendulum is used like the dial on a meter. It amplifies minute, unconscious movements of the healer's hand, thereby externalizing the healer's intuitive impressions, making them clearer.

The Beck Depression Inventory showed significantly greater decreases in depression for the treatment group ($p < 0.001$), sustained at 1 month post-treatment. Chakra pendulum assessment scores for change in all seven chakras were significantly higher for the treatment group ($p < 0.001$).

Healing may also be of help in bereavement. Loretta Robinson (1996) studied a convenience group of 22 adults who had recently been bereaved. "She assigned them randomly to receive either three TT or three mock TT treatments." The brief dissertation abstract states that a Grief Experience Inventory "confirmed that TT was significantly beneficial in helping people deal with grief."

D. HEALING FOR PAIN

Pains of many varieties have responded to healing. This is the symptom that most often brings people for healing. Two rigorous studies (Redner *et al,* 1991; Slater, 1996) and another seven of lower standards (Dixon, 1998; Dressler, 1990; Gordon *et al,* 1998; Keller, 1986; Keller & Bzdek, 1984; Meehan *et al,* 1990; Peck, 1996; Sundblom *et al,* 1994) show significant effects of healing in treating pain. Healing most commonly brings about immediate modest to marked reductions in acute and chronic pains. As with other healing effects, there may also be gradual and modest improvements that continue to accrue with repeated treatments over time.

E. DISTANT HEALING

Distant healing, probably more than any other aspect of spiritual healing, challenges our credulity within Western scientific paradigms. A meta-analysis of distant healing research was published in the *Annals* of *Internal Medicine*

authored by respected researchers. Three types of studies were included: prayer, noncontact therapeutic touch, and other types of distant healing. Literature reviews of available databases through 1999 produced 100 studies of distant healing. "Of the 23 studies that met their inclusion criteria (including 2774 participants), 13 studies (57%) demonstrated positive treatment effects, 9 (39%) showed no effect, and 1 (4%) had a negative effect" (Benor, 2001a).

"This meta-analysis is of great significance for several reasons. The reviewers were very careful in their selection of studies and in their application of methods of meta-analysis. One of the authors, Edzard Ernst, is known to be very conservative in assessing studies of CAM reports. Their conclusions that further studies of healing are warranted is a vote of confidence in the distant healing research they reviewed" (Benor, 2001a).

This meta-analysis also lends credence to the anecdotal reports of a large number of people availing themselves of healing treatments and praying for healing, as well as the growing numbers of anecdotal clinical reports from doctors referring to healers. It suggests that they are engaging in a beneficial therapy, not just wishful thinking, religious ritual (as rote) practice, or placebo therapy.

In *Healing Research* (Benor, 2001a; 2001b), my analysis of 52 rigorous studies of both touch and distant healing found that 39 (75%) demonstrated significant effects.

F. SURVEYS OF HEALEES

While randomized, controlled trials are considered the gold standard for research, patient satisfaction with treatment is another important measure of its benefits. Reviews of five patient satisfaction surveys in England, Holland, and Iceland showed that 79-91% of respondents felt healing was of some benefit (Benor, 2001a; 2001b). This clearly exceeds the percentages that would be expected if healing were merely a placebo.

G. NONHUMAN SUBJECTS

Skeptics may suggest that healing can be no more than a placebo, despite the best human healing research to date. This alternative is difficult to maintain in the face of extensive studies of healing effects on animals, plants, bacteria, yeasts, cells *in* ***vitro,*** enzymes, and DNA, many of which show highly significant effects (Benor, 2001a; 2001 b).

V. SIMPLE TREATMENT: COMMON TREATMENT APPROACHES FOR DEPRESSION, ANXIETY, ADD/ ADHD, AND ADDICTIONS

A. GENERAL SUMMARY

Clinical experience suggests that healing is excellent for treating stress states and anxiety. Healees almost uniformly relax during healing treatments. They may flush, doze, and lose their sense of time.

As discussed, research confirms that healing is effective in relieving short-term, state anxiety, pain, depression, and grief. Healing may also facilitate releases of repressed emotions that contribute to causing and maintaining anxiety, depression, and pain.

My clinical experience is that healing can contribute to medication therapy by potentiating the effects of all medications and by reducing side effects. I often recommend to clients that they pray over their own medications as they are taking them. I have been pleasantly surprised at how well many people receive this suggestion. Part of its appeal may be in introducing a sense of empowerment and participation in a situation where many people feel powerless-even to the point of rebellion and noncompliance. In contrast, I have been disappointed (though not surprised) at the response of physicians and drug company representatives, whose preference in treating side effects of one medication is to prescribe other medications to control the side effects of the first one.

B. HEALING FOR ANXIETY AND EMOTIONAL TRAUMA

I can share from my recent personal experience with severe hip and thigh pain after a fall from a bicycle, exacerbated by lifting a heavy suitcase. Healing directly helped to alleviate some of the pain. What was far more helpful were the memories, elicited through healing, of a lack of attention from my mother during early childhood. These feelings resonated with the anxieties I had after the hip injury, which required that I take several days of sick leave at a time when there was no one near to help care for me. I did not make the connection until I had the healing.

In my work as a psychotherapist, I often find that behind current problems of anxiety, depression, and pain there may lie memories of earlier traumas that resonate strongly with the current ones. In some instances it seems very likely that patients allowed themselves to develop their current symptoms as a way to release the old, buried hurts. This is seen most clearly in post-traumatic

stress disorders. For instance, children who were sexually abused may exhibit grossly inappropriate, provocative sexual behaviors, obsessively and compulsively reenacting their emotional traumas in various ways. With less intense traumas we may have similar experiences. In retrospect, I can speculate that my unconscious mind contributed to my hip and thigh injuries as a way of releasing the repressed emotional pains from my childhood.

C. HEALING FOR DEPRESSION

Early research of healing for depression was discussed above. As with any treatment, there are always nonresponders. One innovative English healer persisted with several patients who had not improved with healing from several different healers over many months. He invited small groups of healers to send distant healing to these previously unresponsive patients, while at the same time the patients were praying for healing. Most of these, including the wife of a physician who had been severely depressed, reported distinct improvement. While I have no formal data to confirm this, my clinical impression is that prayer may reduce the incidence of side effects from antidepressants.

D. HEALING FOR ADDICTIONS

While healing has not been studied extensively as a treatment for addictions, it is so frequently helpful for treating anxiety and depression-both found frequently in addicts-that it is reasonable to expect it should be of help in addictions. **A** study of absent healing as an adjunct to clinical treatment of alcoholism (Walker, 1997) did not find beneficial effects on drinking behavior. However, a *post-hoc* finding was that the healing group had a significantly lower dropout rate from treatment ($p < 0.05$).

E. HEALING FOR ADD/ADHD

I have not found healing particularly helpful with ADD/ADHD, though it also appears helpful here to have prayers over the medications.

F. HEALING FOR PAIN

Healing is an excellent treatment for pain. Relief may be obtained within minutes in some cases, even with chronic conditions. In others, repeated

treatments over a period of weeks and months may be needed to obtain maximal benefits. Occasionally, pain is increased in the first session or two. This is considered a positive prognostic sign by healers, who interpret it as a mobilization of stagnant or blocked energies that are on their way to being resolved. Healing may significantly reduce the need for pain medication. This is a blessing in itself and may also reduce the side effects of pain medications.

G. WHEN TO GIVE HEALING

Healing is often given as a treatment of last resort, after all conventional interventions have failed. This is regrettable, because healers uniformly state their treatments are more effective when given early in the course of an illness. It appears that bioenergetic interventions may be able to arrest the progress of an illness or even to reverse it before it becomes chronic. Once it has been present for a long time, it is much more difficult for healers to bring about definitive changes, although they may be able to provide symptomatic relief.

H. SAFETY

Healing is a safe intervention when used judiciously. There are no known deleterious or dangerous effects of healing. Testimony to this is the annual cost of malpractice insurance for healers in England, who pay less than 10 pounds Sterling for coverage equivalent to that for which physicians pay 1200 and more pounds per year.

Used injudiciously, healing could be harmful indirectly. There have been instances in which people discontinued conventional therapies such as insulin or hormone therapies, believing themselves to be cured of their diseases by healing, with disastrous results.

Postponing known effective treatments while a course of healing is given might put a person at risk of their illness progressing beyond a point that the conventional therapy could be effective. With integrative care, combining conventional diagnosis and treatment with CAM therapies, this need not be a danger.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED HEALER

Healing is a gift, like playing the piano. Some are born with strong, innate abilities; most may improve significantly with deliberate practice; others may never achieve success despite sincere desire and intensive efforts.

There is a broad spectrum of courses and schools for healing. At the rigorous end are schools that offer 24 years of instruction, with experiential and supervised learning. At the other polarity, there are weekend courses in methodologies with no supervised practice. There are no broadly accepted standards for training or certification, and healing is not a licensed therapy in any state.

In healing, perhaps more than in most other therapies, the person who is the healer is the instrument for the treatment. Gifted, natural healers who have had no instruction whatsoever may be excellent healers. Graduates of the most rigorous programs may be mediocre healers.

Selecting a healer is very much like selecting a psychotherapist. It is helpful to have personal recommendations from people you know and respect. No type or amount of training can predict the subtle vibrational resonations that will be conducive to compatibility between healer and healee, nor do we have any way to predict which healer will be the best for any given person. Even healers with outstanding treatment records may have no response in treating some people. Conversely, the most inexperienced novice healer may occasionally produce outstanding results. Again, as with psychotherapy, minimal or no progress with one healer does not say that working with another healer will also produce no results.

Some who offer healing within religious settings claim that faith is required for healing. This may be true for members of these religions who hold to this belief. Repentance and absolution may be necessary for their healing. That this is not universally true is suggested by the highly significant healing effects in studies with mice, rats, hamsters, bacteria, yeasts, cells in **vitro,** enzymes, and DNA. Another issue raised by healers with spiritual beliefs is whether healing through an intent of "Thy will be done" is broader, deeper, or in some other ways better than healing expressed as "My will be done," with a focused intent for a specific outcome. While it may be easy to conceptualize a study where the effects of healing by healers holding to these beliefs are tested in a controlled study, it may be extremely difficult to differentiate beliefs from healing expectancy effects.

VII. SUMMARY

Spiritual healing offers a safe option for treating almost every known illness. Where there is no urgency for other interventions, healing may be a treatment of first choice due to its lack of side effects. Within the framework of holistic medicine, healing is an excellent complement to other conventional and CAM therapies.

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Chapter 13

Medical Intuition

Eric Leskowitz, MD

I . OVERVIEW OF INTUITIVE DIAGNOSIS

Medicine is widely viewed as a combination of art and science. The science of medicine is carefully taught in medical school, but the art of medicine tends to be overlooked in this high-tech era. This is true even in psychiatry, a branch of medicine that used to pride itself on balancing the art of interpersonal relationships (forged in the crucible of psychotherapy) with the science of accurate diagnosis and treatment planning. Now that the science of psychopharmacology is ascendant, psychiatric patients are routinely reduced to neurotransmitter imbalances, and the nuances of person and personality are overlooked. Despite these trends, it is hoped that all medical students can still have an opportunity at some point during their training to watch master diagnosticians at work, to observe the fabled bedside manner and the vaunted nose for diagnosis that are the hallmarks of the master clinician. These subtle skills are at times so evanescent that they seem to be intuitive in nature. They are the core of the art of medicine and will be this chapter's focus.

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Medical education rarely provides an opportunity to look critically at what's involved in these nearly magical gut feelings, because in the Western medical tradition, subjective feelings are not valued as much as objective data. However, a growing literature, largely confined to the popular press rather than mainstream medical journals, now documents the surprising validity of these clinical hunches, this so-called medical intuition (see, for example, Naparstek, 1997 and Schultz, 1997). Writers now suggest that intuition may be such an important resource that it can no longer be overlooked as a clinical option.

This chapter looks at the phenomenon of intuition, with particular emphasis on its application to the field of psychotherapy. We will look at such questions as: Why are some clinicians able to make uncannily accurate hunches? Is it possible to study this phenomenon? Is this a skill that can be learned? I hope to make sense of intuition not only by showing its potential validity and utility, but also by outlining some possible mechanisms of action and by suggesting some ways that the reader can enhance his or her own latent abilities. I'll also look at three major modes for accessing these forms of information: awareness of subtle internal cues, direct perception of a patient's inner being, and access to transpersonal sources of information. This chapter has been written in a more personalized mode than would be expected in an academic text for two reasons. First, the clinical and research literature available to analyze is fairly scant, so there's not yet much grist for that cognitive mill. More important, intuition (as opposed to some of the more mechanistic CAM therapies like acupuncture or biofeedback) is a process that depends in large part on the subjective functionings of the physician him or herself, so an understanding of the phenomenon requires a discussion of personal and subjective experiences. I will include my own, as a sort of test case or exemplar. I should mention that I am not a medical intuitive, but I have had a few experiences that help me glimpse what the masters are talking about. First, let's look at how intuition may be involved in the process of psychotherapy itself.

II. **RELEVANCE FOR MENTAL HEALTH**

A. INTUITION IN PSYCHOTHERAPY

Based on my own informal surveys of professional colleagues in the mental health disciplines, I am certain that most psychotherapists have had the experience of suddenly finding themselves aware of important information about a particular patient, even though there was no logical way that this information could have been obtained. For some therapists, it is a sense of knowing the emotional state of their patient even before the session starts; for others, it can

be insight into a key dynamic issue or knowledge about a specific life event even before it is mentioned in the session; occasionally, it is an impulse to try a medication or treatment option that doesn't seem to make logical sense at the time. These experiences are included in the definition of medical intuition that I'll adopt: the accessing of medically relevant information from sources other than the five physical senses or from the memory banks of past experience.

I first experienced this phenomenon indirectly, while receiving psychotherapy supervision of my work with some patients I was treating during my psychiatry residency. My supervisor, a senior clinician, was remarkably astute at tuning in to key dynamic issues that arose during therapy sessions. I initially assumed that his years of experience gave him the ability to notice subtle cues in body language or voice intonation that I had simply overlooked in my beginner's state of confusion and disorientation. However, I soon realized that something more unusual was going on. This senior psychiatrist was never able to describe how he went from A to B in his chain of reasoning, and his students never gained the same knack that he clearly had. I realized that there was in fact no chain of deductive reasoning involved. Instead, he had sudden insights (for example, that a seemingly happy child playing in the evaluation room was actually terrified; that a depressed adult with cardiac disease was actually relieved that he'd had an MI) that were not contained in the data that were present at first glance to the other observers. Although he himself never believed anything special was going on, I soon came to see that this skill went beyond perception via the five physical senses, that a form of intuition was taking place.

I eventually discovered that every psychotherapist has days when he or she is right on, "in the zone," able to see right through the patient's obfuscations into the heart of the matter. When I have a day like that, I feel like the star baseball player who talked of being so focused during his hitting streak that the baseball looked as big as a watermelon. I used to think such days were random gifts, until I got myself a psychotherapy "batting coach." I learned that "tuning in" to a patient was not a random event, not a matter of willpower, not a result of mastering the research literature. It was a matter of being present, of paying unhindered attention. In other words, the answers are always there, if we can only get out of the way of our preconceptions and limiting beliefs, and of the distractions of our ongoing inner dialogue. When we learn to be quiet and focus, using techniques like meditation and mindfulness, we begin to perceive subtle internal cues that are the doorway to intuitive clinical insights.

Let me now give examples of the three main types of information accessing that I mentioned earlier: the intrapersonal, the interpersonal, and the transpersonal. In the first case, information is presented via subtle bodily cues from within the therapist; in the second, the subtle cues are perceived directly

within the body/mind of the patient; and in the third, information seems to come from beyond the realm of the physical senses.

1. Intrapersonal

a. Casel

While talking about general life issues with a 35-year-old woman who had suffered for many years with chronic migraine headaches, I began to get somewhat bored by her insistence that all was going okay, and that nothing was new in her life. I noticed tightness in my own throat of the type I get when I'm trying to suppress my own sadness. I wondered aloud to her whether she might be feeling sad about anything in her current life situation. She admitted that in fact her need to present this very sense of okay-ness to the world at large had made it hard for her to acknowledge her own deepening sense of sadness about her life at that time. Therapy opened up as she ventilated long-hidden feelings of sadness and anger. This work paved the way for important changes in her emotional and interpersonal life. By acknowledging and valuing her sadness as a barometer of her mind/body balance, she was also better able to manage her headaches by preventing emotional stressors from becoming strong enough to trigger migraine episodes.

In this example, my focused awareness picked up subtle internal cues that helped me deduce what might be happening in my patient's internal state. I'll discuss this process in more detail later, with particular emphasis on a possible mechanism of interpersonal resonance that could link the inner states of two apparently separate people.

2. Interpersonal

The next form of intuition involves direct perception by the therapist of the patient's own internal data. Certain gifted therapists can extend a form of paying attention, tracking directly into a patient's inner life. In other words, some people seem to have the ability to directly "read" what another person is feeling (Karagulla, 1967). This is the form of accessing information that happens in the work described by medical intuitives like Carolyn Myss (Shealy and Myss, 1988), Barbara Brennan (1988), and Rosalyn Bruyere (1988). An example of this sort of direct perception follows.

a. Case 2

I witnessed a psychotherapist/intuitive demonstrate the direct perception of a patient's inner emotional process during an energy healing session. The

patient was a 28-year-old male dancer who had been troubled by a persistent cough. Given his HIV-positive status, there was concern about a possible progression to AIDS, although this background medical information was not known to the healer initially. The healer detected the presence of what he described as a green "sludge" that was stagnating in the patient's lungs. He described this as the embodiment of unexpressed sadness generated by the patient's distant relationship with his sister (though he knew nothing about the patient's family situation). The patient acknowledged this dynamic and reported that the congestion cleared and the sadness lifted during an energy healing session that energetically transformed the green energy into a more harmonious color that enabled it to dissipate.

3. Transpersonal

The third form of intuitive perception is involved when we simply seem to know or hear information that doesn't arrive through our own perceptual apparatus, whether of the subtle sensory or standard physical type. This dimension has been called transpersonal because it involves aspects of consciousness that operate beyond the realm of our personality attributes and even beyond the limitations of space and time. Consider the following example.

a. Case 3

I was treating a 35-year-old Israeli geography professor who had developed chronic myofascial pain syndrome 10 years earlier. He pursued his academic career in the United States despite severe pain, and pushed himself to function in a rigorous academic setting. He was losing ground to his pain, as he became progressively weaker and more depressed. I was seeing him in weekly supportive psychotherapy, trying to help him minimize the stress of his rigorous schedule. One day while waiting for him to arrive for his appointment, I found myself daydreaming and looking out my office window at the maple tree just outside. For some reason, I became fixated on this image in a way I had never done before, noticing how solid the tree was despite the steady wind blowing. The reverie stopped when I saw his car pull into the parking lot.

I thought nothing further of my brief inner digression, until he began the session with a new theme, that of being a displaced person who had never felt truly at home in the United States. By his third sentence, before I had even spoken a word, he had compared himself to a tree, one whose roots were in Israel rather than the United States. Working with this image of a tree gaining

stability from its roots, he was led, over the course of the next few months, to the difficult decision to move back home to Israel.

I had no internal gut feeling this time, no direct glimpse into my patient's innards, just a piece of information that seemed to suddenly pop into my awareness from who knows where. Using these three examples as springboards, we'll now consider how best to understand this process.

B. INTUITION: MECHANISM OF ACTION

Let's start with Case 1 and the famous "gut feeling" (this time located in the throat!), these internal physical or psychophysiologic shifts that careful therapists are trained to notice. I'm suggesting that these perceptions come about not because of a cognitive or even autonomic reaction to the content of what happens in therapy, but because of subtle energetic interactions between patient and therapist.

The reader is referred to the chapters in this book on acupuncture and energy healing for a fuller explanation of the notion of subtle energy or vital force. Most healing traditions around the world (except for Western medicine) believe that living organisms are animated by a subtle force that is more ethereal than muscles, bones, and nerves. This energy flows freely in health and is blocked in illness. It also mediates the dynamic interplay between all living beings in general, particularly the interaction between therapist and patient.

Many cultures have perceived that this energy is concentrated in certain regions of the body. Each of these energy centers (commonly called *chakras*, the yogic term) is felt to regulate a particular emotional quality by transforming this universal life energy to the appropriate frequency. Freud's libido, for example, is the sexualized version of this universal energy, as modulated by the sexual chakra. These seven main centers are aligned along the vertical axis of the body, in the same place as our major endocrine glands. Because these structures possess a sense of energetic frequency as they cover the emotional spectrum from fear to bliss, they have often been metaphorically compared to tuning forks. They each resonate in their own unique frequency range. In other words, these centers can function as energetic tuning forks and can resonate according to the type of energetic emotional input from the surroundings (see Tatum, 1999, for a more detailed discussion o f this resonance process).

The reason you can feel the tension in a room, or can sense a patient's anger before a word is said, is that your energetic antennae are resonating in sympathy with the vibrational atmosphere of the moment. The tight throat, the butterflies in the stomach, the scalp tingling are all subtle energetic cues

that one of your energy centers is being activated. The more you fine-tune this sense, the more accurate your intuitions become. The reason they're important to monitor during psychotherapy is because, as therapists, our energy fields are constantly interacting with our patient's, and the sensations we feel in ourselves are that half of the subtle energy dance that we have direct access to. In Case 1, I felt my throat center being activated, and I deduced that my patient's sadness was triggering this feeling because her energetic process was entrained with my own.

With Case 2, the intuitive psychotherapist could literally read important and specific medical and psychological information from the invisible (to most of us) subtle energy field. In this vein, some clinicians have begun to collaborate with intuitives, using them in the initial diagnostic phase, to facilitate the development of the most appropriate treatment plan. One model for this sort of collaboration is outlined in Shealy and Myss's book *The Creation of Health* (1988). The terminology of extrasensory perception (ESP) is usually used—clairvoyance, clairaudience, and clairsentience. However, this language often triggers strong adverse reactions in otherwise open-minded observers, so in this chapter I will work with alternative terminology. This form of direct perception of another's emotional or physical state is obviously not accounted for in traditional medicine, yet there is, again, a growing body of experience supporting such claims (Radin, 1997).

The simplest example of this direct perception involves the awareness of someone else's presence. We've all had the experience of feeling someone behind us, and some people seem to have quite reliable "eyes in the back of their heads." Others are more attuned to feeling stared at. Solid experimental work has proven that our autonomic nervous system reacts when we are stared at, even when we are not consciously cognizant of the fact. Braud and colleagues have complied numerous studies of this so-called distant attention phenomenon (Braude, 1993), which is covered in Section IV. A related form of subtle perception involves a sensitivity that many hands-on healers seem to possess. They use their hands to sense the boundary of another person's aura, as well as irregularities in this field, which are indicators of underlying medical or emotional problems. This, too, is discussed later in more detail.

The third category of intuitive information gathering happens from what is called the transpersonal realm and is more controversial even than subtle energy resonance. Briefly, the term *transpersonal* refers to realms or dimensions of human experience that lie beyond the reach of the everyday personality, beyond the reach of the five physical senses, and beyond the limitations of space and time. In the Judeo-Christian tradition, biblical sources commonly mention key religious figures hearing God's word directly; these prophets held positions of great power because of the accuracy of their miraculous

information. Similarly, in classic Greek thought, artists were felt to be inspired directly by their muse, a lesser god who communicated directly to humans by idea, image, or sound.

This prophetic tradition is still alive today under the guise of channeling (Leskowitz, 1999). In addition, there is an important subgroup of intuitive diagnosticians who use this modality to gain information. Much like Edgar Cayce, America's so-called sleeping prophet, some people enter an altered state of consciousness in which another personality seems to report ideas to them. In Cayce's readings, he would apparently go to sleep on a couch, and when a patient's name and hometown were spoken to him, he began to talk in extreme detail about various aspects of the patient's medical condition, from inciting factors (in this and previous lifetimes) to recommended treatments (Sugrue, 1942). Since Cayce was a poorly educated photographer with no medical background, the medical experts of the day were eager to discredit him. However, his legacy still stands in the form of the archives of more than 10,000 readings collected at the Association for Research and Enlightenment in Virginia Beach, Virginia. One review of these cases (Cayce & Cayce, 1971) estimated at least a 40% concordance with the primary medical diagnosis.

Although Cayce was unable to remember any of his teachings after his return to normal consciousness, other trance diagnosticians are able to remember the process. Many well-known historical figures had regular interactions with an inner intelligence, which they felt was separate from their own personalities. These intelligences are often called spirit guides, and they were consulted regularly by such well-known physicians as Carl Jung (with his guide "Philemon") and the well-known holistic physician Bernie Siegel (and his inner guide "George"). I will not discuss this controversial field in any detail, but refer the interested reader to such sources as Hastings (1991) for a history of channeling, Stevens (1988) for an example of social commentary from a discarnate source, and Brennan (1988) or Serinus (1986) for examples of channeled information on various medical and psychological topics.

I hope that these possible mechanisms of action for the three main types of intuitive processes can help us to begin looking at the topic more analytically and less magically.

III. CONTRAINDICATIONS AND COMPATIBILITY

It's hard to imagine a contraindication to a process that's practically built into the psychotherapy experience itself. In fact, if it were contraindicated to use intuitive resources in psychotherapy, then computer-assisted therapy would

become the gold standard of treatment. However, practitioners must learn to use their hunches responsibly rather than recklessly. With any novel treatment, there are irresponsible practitioners, and medical intuition is no exception. The skillful practitioner of medical intuition must balance cognitive or physically obtained information with intuitive information. Practice makes perfect. Section VI explains how to train and refine these abilities and, most important, how to obtain reliable feedback and coaching so that one's intuition is used more accurately and responsibly. But for now, caution must be the watchword. With this caveat, intuition can be compatible with any form of psychotherapy.

IV. RESEARCH

Before delving into the research literature on medical intuition, it's worth taking a brief look at another form of research into medical intuition (even though it is admittedly poorly controlled) because it highlights some of the key issues here. I'm referring to semistructured personal experiences. For several years, I have facilitated training workshops in medical intuition, and part of the group experience is for the participants to attempt their own intuitive diagnoses of volunteer subjects. The first patient I ever chose for one of these demonstrations suffered from lupus and chronic fatigue syndrome, and had symptoms in nearly every organ in her body. So when the workshop participants recorded their intuitive "hits" about where the volunteer was suffering, nearly all the guesses turned out to be true! Maybe it was a boost to the confidence of the budding intuitives, but it wasn't good science.

Since then, I've chosen subjects who have only one diagnosis or affected body site. Hit rates are much lower, but when a correct guess is made, the validity is more impressive because the statistical odds are much longer. The next step in attempting to build a body of solid evidence would be to do repeat testing over various patients with the smaller subgroup of participants who seem to have the "knack." Several researchers have tried to do just this, and several such studies will now be mentioned, because they illustrate the pitfalls of this sort of research.

B. CONTROLLED STUDIES

The most charitable comment a reviewer of the research literature on medical intuition might make is that the field is ripe with opportunities. The literature

is admittedly sparse, but three representative studies can be highlighted. Of note, the largest repository of online medical information, Medlines, has only recently begun to include CAM journals in its database and may never include references from journals of parapsychology, which have published the best work in the field. So even if quality research does emerge with time, the prospects of good data on intuition gaining a wider audience faces this obstacle of limited access.

One early study from 1973 (Brier ***et*** *al.)* found minimal positive results when a group of recent graduates of a then-popular form of mental training (Silva Mind Control) were asked to intuit the diagnoses of a series of surgical patients whose names and ages they were given. As a group, the results were not statistically significant, although two individual practitioners appeared to be more accurate than chance would normally allow. Several studies by Shealy in the 1970s reported extremely high accuracy rates (over 95% correct) for several individual psychics, but unfortunately the criteria for determining accuracy of diagnosis were never mentioned (Shealy, 1975).

A useful summary of the research literature on intuitive diagnosis was collected by Benor (1992a; 1992b). He noted the absence of tightly designed studies of the accuracy of intuitive diagnosis and presented the results of his own pilot study. By having a team of healers simultaneously assess each patient, without prior knowledge of medical condition, he was able to tally results of medical and psychological diagnostic guesses. Interestingly, he noted a wide range of responses at the anatomical/medical level but found more congruence among diagnoses of emotional/psychological problems. Significant difficulties in interpreting results stemmed from the lack of a common language between the intuitives and the physicians who attempted to corroborate the diagnoses. His paper concluded with important recommendations for establishing a protocol for more valid studies in the future, including controls to eliminate cues from the patients during seemingly innocuous conversations, use of quantitative scoring systems, and use of patients who were emotionally invested in learning from the input of the intuitives (he had hypothesized that emotionally neutral patients might not be activating their energy fields enough to be read).

The most recently published clinical study of the accuracy of psychic diagnosis was done in 1997 (Young & Aung). Indicative of the relatively disorganized state of the field, the authors did not even reference Benor's work, again most likely because their literature search was restricted to Medline's journals. Their study falls into many of the traps outlined by Benor (including having the treating physician present during the assessment and allowing the patient to converse with the examiners). The authors concluded that the correspondences within their team of psychic diagnosticians "was not sufficiently

impressive to warrant considering psychic diagnosis as a useful alternative method for diagnosing disease." However, this conclusion came after they arbitrarily eliminated some apparently successful intuitive hits from their data pool: for example, a lung carcinoma detected by X-ray was not felt to match the "patches on the lung" described by the psychic. In an accompanying editorial commentary (Jobst, 1997), a well-known figure in the international CAM community acknowledged these methodological faults but defended the paper's publication as a means to stimulate discussion about an important but often overlooked topic.

The research field is not completely bleak. At least one subdivision of intuitive diagnosis has been subject to rigorous analysis. That is the area dealing with the sense of presence, the sensation that someone is either looking at you or intruding into your personal space (your energy field). In the previously mentioned "distant attention" studies, Braud and colleagues (1993) designed meticulously blinded studies that eliminated any sources of information from the five physical senses to show that the autonomic nervous system registered changes in heart rate and galvanic skin resistance whenever the subject was unknowingly being stared at through a one-way mirror.

This is a modified version of the previously mentioned sensory assessment process used by many energy healers, especially therapeutic touch (TT) practitioners. Two important studies have been done on the reliability of this manual sensitivity. In a positive study done in 1986, Schwartz and Russek (1995) showed that 65% of the time, trained healers could detect the presence of the experimenter's hand held several inches from their own palm, at levels of high statistical significance. Interestingly, a similar protocol was used in a highly publicized study that appeared in 1998, which seemed to discredit this form of energy sensing. The prestigious *Journal* of *the American Medical Association* added more fuel to this fire by publishing a version of an 11-year-old girl's science fair project (Rosa *et al.,* 1998), which found that nurses trained in therapeutic touch were only correct 44% of the time when asked to assess, while blinded, which palm the tester's hand was near. Despite omitting key elements of the TT process, despite not controlling for experimenter bias, despite poor standardization of nurse skill level, and despite a literature search that overlooked the previously mentioned confirmatory study, they presented their findings as conclusively negative. The subsequent wave of adverse publicity in the mass media was an unfair setback for members of the general public who were trying to get objective information about new research in energy medicine.

Therefore, in summary, the field of research into medical intuition is still in its infancy. I would rate the work to date in this field as only 1-2 out of 6

on the rating scale used by this book's editor. At least standards have now been established to ensure that future studies are credible and valid.

V. COMMON TREATMENT APPROACHES

Because intuition is a diagnostic rather than therapeutic modality, I will depart from this book's format in this section. Rather than describe the use of intuition in specific clinical conditions, I will now describe several ways in which intuition can be directly applied in the common clinical setting of an office-based psychotherapy practice.

A. COUNTERTRANSFERENCE-BASED INTUITION IN PSYCHOTHERAPY

The first clinical application of intuition that I'll discuss is actually a reframing or reconceptualization of a universal clinical experience - counter-transference-rather than a distinct technique per se. It may seem odd that a chapter focusing on a New Age approach to psychotherapy invokes one of the oldest concepts from staid Freudian psychoanalysis, but I believe the Freudians were onto something. Even though the stereotyped image of a Freudian is of a neutral blank slate with no emotions, the second- and third-generation analysts realized that something crucial was being omitted by the focus on the analyst as a blank screen. They felt that an important source of information about what was happening in the psychotherapy process lay in what the therapist felt arising within him or herself during the course of the therapeutic exchange. Initially, this so-called countertransference was felt to represent unanalyzed conflicts (inappropriately transferred by the therapist onto the therapy scenario), which would disappear once the therapist had been adequately analyzed. Now, countertransference is felt to be part of the natural human reactivity in all interpersonal encounters. By knowing one's reaction patterns, one can deduce a patient's inner state.

For example, I'm usually very patient while listening to my patients recount the details of their stories. It's unusual, and significant, for my mind to pull me away from the room and daydream about being somewhere else. So when I feel this tug to drift away, I've learned from experience that it's usually a sign that I'm being drained by my patient, especially by the sort of patient who seems to feed off of my attention. If I remember that I'm actually reacting to the patient's need for attention, I can then make empathic use of this insight, rather than lose my focus and turn away in avoidance. I can

deduce the patient's hidden inner state by assuming that it is the complementary match to my own; if I'm doing the withdrawal tango, it's because the patient is probably leading in the same dance by sucking me dry. Again, intuition isn't telling me something I don't already know, it's clarifying what's hidden beneath the surface. In fact, intuitive insights probably would have eventually surfaced in the course of the normal psychotherapy process. Intuition simply accelerated the process.

Interestingly enough, at least one contemporary psychotherapeutic technique bridges the arid world of classical psychoanalysis to make important and explicit links with the energy-based forms of psychotherapy and intuitive diagnosis. One of the most important techniques in body-centered psychotherapy is a codification and clarification of the neo-Freudian charge to pay attention to what happens within the therapist as therapy unfolds. The clinical psychologist Eugene Gendlin realized that body-oriented self-monitoring was a skill that could be cultivated and taught. He has become widely known for refining the technique called "focusing" to help patients access emotions that they had lost conscious connection to (Gendlin, 1996; Klagsbrun, 1999). When therapists monitor themselves in the same way in which they encourage their patients to self-monitor, valuable information emerges that allow the therapists to better understand their reactions to the psychotherapeutic process (Hinterkipf, 1998). It's a short step from using focusing to keeping therapy on track, to using it as a doorway to intuitive information gathering.

B. LOW-TECH TOOLS AND TECHNIQUES

In this section, I will review several techniques to amplify intuition, to increase the signal-to-noise ratio of one's receptive apparatus (as they say in the electronics business). These techniques magnify information that has been received by our subtle energy fields, and present this information at a coarse-enough level that it can be perceived by our physical senses. Be forewarned that these techniques carry with them a strong negative cultural prejudice, which I'm now asking the reader to place aside for the moment, to be reconsidered when we've finished this review. For if we accept that the human subtle nervous system can access information that we are not consciously aware of, then these techniques make good sense.

1. Ideomotor Signaling

For more than 50 years, the field of clinical hypnosis has used a technique that enables the patient to access hidden information for making accurate

intuitive diagnoses and treatment plans. This technique involves the establishment, during a hypnotically induced state of relaxed but focused attention, of a signal system in which the inner mind, or unconscious mind, is invited to use the body to give a physical signal indicating a yes or no response to any of a number of questions. Typically, the movement of indicator fingers is used—a twitch of the forefinger indicates a positive response, a twitch of the middle finger a negative response. Because internal ideas are translated into motor activity, the technique is called ideomotor signaling (Rossi & Cheek, 1988).

The technique has been used to help access remote and forgotten memories, to determine whether a particular treatment option or medication is in harmony with the body's wisdom, and to validate a patient's own intuitive sense about particular life issues. In this situation, the patient (or the therapist) is using his or her psychophysiologic responses just as a polygraph (lie detector) does. The patient is then able to access information that lies outside conscious awareness.

2. **Chevreul** Pendulum/Dowsing

Another method of amplifying subtle bodily cues so they become evident to conscious awareness is dowsing (Lonegren, 1990). In the psychiatric/hypnotic literature, the tool is referred to as the Chevreul pendulum, after its initiator. Simple yes-or-no questions are asked of the patient, and the movement of the indicator is noted (the patient holds a small weight suspended on a string; the indicator moves in a different pattern for yes and no answers). Similarly, a dowsing rod twitches in response to subtle cues (Laskow, 1990). Nevertheless, the pendulum and the dowsing rod are just physical magnifiers that take minute movements of the hands and make them visible to the naked eye. The dowser allows the innate electromagnetic sensitivity of the body to detect the underground water, with the rod as the signaling device. The psychotherapist who uses a pendulum is simply accessing innate knowing via this signaling device. Similarly, energy healers often use a pendulum to assess the activity level of the subtle energy vortices known as chakras (Brennan, 1988) by literally suspending the pendulum over the chakra and noting its pattern of movement (clockwise vs. counterclockwise, wide arc vs. narrow arc, etc.). In none of these cases is the device the source of the information, though it appears this way to observers. The device is merely the intermediary, the information transducer.

3. **Muscle Testing (Applied** Kinesiology)

Developed by the chiropractor George Goodheart in the 1960s and refined by the psychiatrist John Diamond (1985) over the past 30 years, kinesiology

involves asking the patient a question about his health status and letting his body answer. The strength of a particular "indicator muscle" is tested manually, most commonly by extending the patient's arm and having the examiner push down on it to assess the strength of the deltoid muscle. Surprisingly, this strength varies noticeably, depending on the cognitive/emotional state of the patient. The arm literally droops when the patient is aware of stressful or dystonic material, while it strengthens visibly when the patient entertains upbeat or harmonious thoughts. Moreover, when the questions are asked of unconscious rather than conscious sources, kinesiology becomes another lie detector test of one's own mind. Numerous energy-based psychotherapy protocols now make use of this tool-thought field therapy (TFT) and healing from the body level up (HBLU) being representative examples (see Web sites for Callahan and Swack, respectively).

Kinesiology also has a potential application to psychopharmacology. In situations where treatment algorithms do not provide clear guidance on how to proceed with second- or third-tier drug options (i.e., in most real-world situations), intuitive assessment can play a valuable role. For example, in prescribing antidepressants, the decision is usually based on side-effect profiles and tolerability, as all agents have similar efficacy rates. However, even experienced psychopharmacologists will acknowledge that the selection process can at times be something of a crapshoot. Here is where intuitive assessments can help.

The practitioner can use one of the low-tech indicator techniques to assess which of a proposed series of antidepressants are most harmonious with a patient's current situation. Of course, any response must be in alignment with the practitioner's clinical experience and judgment, which provides the first cut in the process of elimination. However, this system has been widely used for years by chiropractors, using muscle testing to determine the potential efficacy of proposed nutritional supplements or dietary changes. I am not aware of any double-blind tests that have measured the accuracy and efficacy of this approach. Thus, at the present, there are only case reports and invalidated practice patterns.

In my practice, for example, I have a stockpile of test samples of the major antidepressant agents. Occasionally, when it is unclear which of several appropriate agents to use, I will have the patient hold a sample in one hand while muscle testing the other arm to determine if the substance is potentiating or destabilizing. I choose the agent accordingly, and then prescribe dosages based on traditional clinical judgment (although other practitioners even muscle-test to determine specific dosages too). I can only say that sometimes the system seems to save time and come up with a good match on the first round, while at other times it's as frustrating as "normal" algorithm-based psychopharmacology. Again, solid research on this process is certainly possible but is currently lacking.

VI. TRAINING AND QUALIFICATIONS

How does one become a board-certified medical clairvoyant? That's an issue for the distant future of holistic medicine. For now, we have to deal with the paradox that some of the most gifted and accurate psychic readers have absolutely no medical credentials whatsoever. My three primary energy arts teachers, for example, were trained as an engineer, a biochemist, and a social policy analyst! This obviously raises important ethical questions. What is the importance of medical training, what is the value or need for certification if the most adept are not certified, is there any training program that can possibly ensure the development of such difficult-to-assess skills?

Certainly, we've all seen advertisements promoting all sorts of miraculous clairvoyant services. Ultimately, the best way to make a decision is to research any practitioner's standing in his or her local community - among professional colleagues as well as other patients. Bearing these caveats in mind, several training programs have stood the test of time, have attained good standing in the national CAM community, and have developed their own internal certification processes to ensure quality control. None are yet recognized or certified by any state or national governing body, so quality control is more often than not a matter of professional reputation in the community. However, the key point is that medical intuition is a learnable skill, with some having more natural aptitude than others. Self-training can get you started (Naparstek, 1997), but established programs can take you further (see the Web sites referred to in the Resources for the Barbara Brennan School of Healing and Rosalyn Bruyere's Healing Light Center Church).

I hope this overview will stimulate your curiosity enough to explore some of these notions further. If nothing else, I hope that, as you begin to make your way along this path, you'll remember to start trusting your gut feelings. I have a hunch that you will!

VII. RESOURCES

Barbara Brennan School of Healing: www.barbarabrennan.com

Rosalyn Bruyere's Healing Light Center Church: www.RosalynLBruyere.org

Callahan: www.thoughtfield.com

Swack: jaswack.com

Nina Zimbelman, The Gleanings Foundation
RR3 Box 224N, Robbinsville, NC
Tel: 828-479-8300

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Chapter 14

Spiritual Psychotherapy

Jerry **Wyker, MD**

I. INTRODUCTION

The overwhelming burden of scientific evidence from research in areas such as biofeedback, meditation, and hypnosis is to document the existence of a mind-body interface. These techniques can affect the physical body in ways that dramatically improve both physical and mental health. This concept would have been scientific heresy 100 years ago, but research from many sources now points to a mind-spirit interface, and many practitioners

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are transitioning from conventional disease-based medical care into a more holistic health care experience.

The mind-sprit interface demonstrates a positive effect on health from spiritual pursuit, which has been well documented. We are also seeing increasingly mature systems to support positive spiritual development outside religious institutions. This chapter reviews this pattern and highlights three specific systems that support spiritual development, delving deeper into one of those systems. It also explores the relevance of these systems to mental and physical health.

Emotion is the language of spirit; body is the language of mind. The mind-body techniques improve mental and physical health by training and focusing our mental activity. The spirit-emotion aspects interface and guide healing and health by structuring the broadest beliefs, attitudes, and perspectives with which we create our existential viewpoint. This broad set of beliefs becomes a type of spiritual psychotherapy that can transform our perspective of our self in the universe. The resulting mind-set ultimately generates a positive emotional atmosphere for the individual, much the way specific attributions such as unconditional love alter the emotional tone to a situation.

For example, let's say someone pushes in front of us in a line at the drug-store. Our emotional tone may differ depending on whether we see him as (a) an aggressive and insensitive bully who is ignoring us, (b) a harried father picking up needed medications for his very ill child, or (c) a person for whom we consciously allow unconditional love to flow because we refuse to allow him to be the excuse for our disconnection from well-being. We know, then, that *belief* and *desire* can alter context and response.

This chapter focuses on three spiritual psychotherapies that have many common characteristics. Some call them "joy-based" psychotherapy because this is the end point that these belief systems create. The three systems are *A Course in Miracles,* published by the Foundation for Inner Peace, 1976, *Conversations with God,* published by Hampton Roads Publishing Company and G. P. Putnam's Sons (Walsch, 1995), and the Abraham-Hicks materials, recorded and published by Jerry and Esther Hicks (Hicks & Hicks, 1989).

Each of these thought systems is a freestanding course in unconditional love and spiritual-emotional transformation, but they are psychologically and theologically aligned. Each of these systems represents a transmitted spiritual teaching; that is, the person who has transmitted this work does not claim authorship. All three share the ability to facilitate mental health and holistic healing, and the incredible popularity of these three systems reflects the thirst in our culture for spiritual guidance that is enlightening, effective, and free of institutional baggage.

II. MODALITY OVERVIEW OF JOY-BASED PSYCHOTHERAPY

For the past 25 years, so-called transmitted spiritual thought systems have been of personal and professional interest to the author. In his experience, *A Course in Miracles, Conversations with God* and the Abraham-Hicks materials are an elegant trilogy of new scriptures that are presented here primarily in a mental health context. Collectively, these three spiritual thought systems share the following qualities:

- *They are joy based.* They are freestanding courses in unconditional love and exist in contrast to conventional illness-based psychotherapy and fear-based religious teachings.
- *They are internally consistent.* Each system's respective linguistic "deep structure," a term used by linguists in transformational grammar, is philosophically consistent with well-being and unconditional love; that is, "the map fits the territory" (Bandler & Grindler, 1975; Grinder & Elgin, 1973).
- *They are complimentary and complementary.* Although each system is a freestanding course in unconditional love, collectively they are theologically and psychologically coherent and aligned, similar to the energy of a laser.
- *They are spiritually transmitted.* The transmitter is not the author. *A Course* **in** *Miracles* is written as Jesus in the first person. *Conversations with God* is written in the voice of God. And the Abraham-Hicks materials were originally titled *Abraham Speaks.*

A. DESCRIPTION OF *A COURSE IN MIRACLES*

A Course in Miracles is a self-study course consisting of three volumes: a text, a workbook for students, and a manual for teachers. It is available in a three-volume set and a single-volume edition of 1249 pages. The *Course* was received through a process of "inner dictation" by a psychologist at Columbia University beginning in 1965. After 10 years of preparation, the *Course* was published in 1976 by the Foundation for Inner Peace.

The *Course* strikes at the heart of the basic human condition, which it characterizes as one of conflict, suffering, and despair, and of fearful isolation from God, others, and even ourselves. The *Course* aims at the healing of this condition by effecting a profound change in our basic outlook. Its tool is the healing of human relationships, which it accomplishes by transforming our perception of others to seeing them as fundamentally good and holy. This opens the way for love, which replaces fear and separateness, which the *Course* describes as our natural inheritance.

A Course in Miracles is a phenomenon that has affected the lives of many thousands of people. Since 1976, more than 1 million sets of these books have been sold, without the benefit of any paid advertising, to men and women in every walk of life and every major faith, in all 50 states and nearly 50 foreign countries. It is more academic and perhaps more "white collar" than the other two spiritual systems. Supporters of the *Course* include Ken Wapnick, PhD, who has indexed the *Course* and confirmed that it does have philosophic and linguistic "internal consistency[7]" (Wapnick, 1982). Jerry Jampolsky, MD, has demonstrated in his Center for Attitudinal Healing that the *Course* can work in the trenches of clinical medicine with children who have catastrophic illnesses and their families (Jampolsky, 1979). Roger Walsh, MD, PhD, has aligned the *Course* with "the perennial wisdom" seated in all great spiritual systems (Walsh, 1999).

B. DESCRIPTION OF *CONVERSATIONS WITH GOD*

Conversations with God has been on the *New York Times* bestseller list for more than 100 weeks, has sold more than 1.5 million copies, and has been translated into 24 languages. There are three *Conversations with God* books, called "the trilogy." They were published from 1995 through 1998, and contain 830 pages. Book One deals mainly with personal topics, Book Two deals with more global topics, and Book Three addresses universal truths-the nature of the soul, space, and time, and highly evolved physically based societies in other parts of the universe.

Conversations with God were "transmitted" through Neale Donald Walsch and they are also a biography of Walsch's dark night of the soul and his evolving enlightenment (Walsch, 2000). The three *Conversations with God* books are followed by two additional books, *Friendship with God* (Walsch, 1999) and *Communion with God* (Walsch, 2000), which complete the "with God" series. The five-book series contains approximately 1500 pages.

C. DESCRIPTION OF THE ABRAHAM-HICKS MATERIALS

Abraham, a group of obviously evolved teachers, "speak" their broader nonphysical perspective through the physical apparatus of Esther Hicks. They speak to our level of comprehension through a series of loving, allowing, brilliant, yet comprehensively simple recordings, available in print and in sound. They guide us to a clear connection with our own inner being.

Jerry and Esther Hicks have now published more than 500 Abraham-Hicks books, cassettes, and videos. They present open-group interactive workshops

in about 50 cities a year to those who gather to participate in this expanding stream of thought and well-being. Attendees at the workshops are able to feel the energy vortex in a room of aligned vibrations, see Esther's aura when she is, and is not, directly transmitting Abraham's teachings, and hear Jerry's outrageous questions. Leading-edge thinkers worldwide have given attention to this *Science of Deliberate Creation and Art of Allowing* thought system, and these people have incorporated many of Abraham's concepts into their books, lectures, sermons, screenplays, and scripts. The primary spread of this material, however, has been from person-to-person recommendations as individuals discover the value of implementing this thought system in their own personal, interpersonal, and transpersonal experiences.

Of this elegant trilogy of new scriptures and their respective courses in joy-based psychotherapy, the Abraham thought system stands out because of the following psychological and spiritual factors:

- It is the easiest for most newcomers to comprehend, especially if the student is an aural rather than a visual learner, because most of the Abraham materials are on audiotapes.
- It is the easiest for most newcomers to engage in experientially. The three universal laws are clear and simple core principles for psychotherapy, and these principles are integrated repeatedly.
- It is the quickest way for most newcomers to manifest new outcomes; for example, if one masters the law of allowing, well-being is a "done deal."
- It is the most dynamic. The Abraham-Hicks workshops are live, interactive, and available twice a year in major cities throughout the United States.
- It is the most ongoing and systematic. The Tape-a-Week or Tape-a-Month options periodically realign focus and encourage personal growth and evolution.

For these reasons, the remainder of this chapter focuses on joy-based psychotherapy based on the Abraham thought system.

D. PHILOSOPHY OF THE ABRAHAM-HICKS THOUGHT SYSTEM

The three universal laws are the philosophical, psychological, and theological centerpieces of the Abraham thought system (Wyker, 1996):

1. The law of attraction: That which is like unto itself is drawn (Hicks & Hicks, 1989).
2. The law of deliberate creation: Bringing the vibration of one's belief into harmony with one's desire (Hicks & Hicks, 2000a).

3. The law of allowing: Individual discovery of harmonious vibration to desire (Hicks & Hicks, 2000a).

The author's overview of these Abraham principles forms a 12-point gestalt:

- The law of attraction, that which is like unto itself is drawn, is "the most powerful law in the universe." Abraham further observes, "There is not a shred of evidence to the contrary."
- Well-being is our birthright, and if we are not "attracting" (Law 1) moment-to-moment joy, we are still creating our own present reality.
- If we do not like our present reality, we can "deliberately create" (Law 2) the reality we do want.
- We can deliberately create the reality we do want by consciously "allowing" (Law 3) our connection to our source, or God, or our natural well-being, or unconditional love to consciously flow.
- How we feel or emote in every moment is a perfect match with what we are consciously or unconsciously envisioning, thinking, or experiencing.
- Unconscious and nonconscious habits of fear-based thinking; that is, default or "stinking thinking," manifests as our mental and physical illnesses.
- To deliberately think joyfully, to practice joy, and to fanaticize joy is therapeutic, and it offers immense health and cost benefits.
- Our emotions, how we feel, tell us in every moment how well we are consciously choosing to be connected to our source, or God, or well-being, or unconditional love.
- If the emotion feels bad, we can know our thoughts are, in that moment, attracting an unwanted condition.
- To feel not well, or ill, is a sign of our lower-slower vibration or perception of separation from our source, or God, or well-being, or unconditional love.
- Therefore, enlightenment is a process of remembering who we are and from whence we came and allowing unconditional love and well-being to flow.
- Do you want to change the way you feel? "Ask, and it is given; allow, and it is manifested" (Wyker, 2000b).

E. THE "ABRAHAM SPEAKS: ON THE THREE UNIVERSAL LAWS" PATIENT INFORMATION BRIEF

The *Abraham* ***Speaks*** document reproduced in this section with its discussion of the three universal laws is a sample of one of more than 70 patient

information briefs that the author selectively uses with interested patients who are newcomers to his practice of holistic medicine. This brief is usually introduced as part of the initial holistic healing plan, which is customized for each new patient (Wyker, 1996).

Patients are never encouraged to leave a religious or spiritual belief system that is satisfying and effective for them. A holistic physician should only offer or suggest alternatives and then, if requested, facilitate one or more of the three spiritual thought systems into the healing relationship.

Initially, most of the author's patients come for, and are most interested in, biological medicine. Although the "new scriptures" are offered, most newcomers do not passionately implement any of them into their immediate health care. However, during the evolution into their holistic healing plan, a significant number of clients become interested.

The Patient Information Briefs Summary

Reality is known through experience, not words. However, Abraham teaches with words because words can manifest thoughts in us-and thoughts can manifest deliberate creative experience. Default experience is nondeliberate or nonthoughtful experience, the experience most of us have much of the time; and with such experiences, we are partially separated from our own inner being, or higher self, or Holy Spirit, or whatever synonym one prefers.

Abraham teaches that we enthusiastically chose to come into this current physical lifetime to scan the vast and various contrasts in thoughts and experiences, and then deliberately create our new experiences. We are physical extensions of our own nonphysical inner being; that is, thought precedes form. Because thought precedes form, for example, sustained images of health, not of illness, must proceed all sustained healing.

There are three specific experiences that are our birthright: joy, freedom, and growth. The object of our life is joy. The basis of our life is freedom. The result of our life is growth.

The good news is: We create our own reality-with our thoughts and visions. The bad news is that this core philosophical principle is not generally the cultural thought system with which we were imprinted, educated, and with which we live. We usually envision and ruminate on what we do not want, rather than what we do want. The universe manifests what we imagine or envision, whether by default or deliberate creation. So, more good news: If we do not like our present thoughts and feelings, we can change them immediately; if we do not like our present experiences, we can create the experiences we do want. We create with desire, intent, and logical next steps.

Our emotions, that is, how we feel, give us moment-to-moment feedback on how well we are connected or aligned with our inner being. If our experience is some aspect of joy, freedom, and growth, we feel good. If we feel bad, or negative, or ill, we are not aligned with our inner being, and we are not deliberately claiming our birthright.

Three universal laws exist: (1) the law of attraction, (2) the law of deliberate creation, and **(3)** the law of allowing. These laws are always true and always everywhere, in the physical and in the nonphysical.

Our conventional culture teaches us to create with action. Abraham teaches that to create with deliberate thought is many times more powerful than to create with action. Action is intended for the joy of the unfolding and for physically experiencing our creations or manifestations.

Abraham teaches that we came to be physical beings in this lifetime to be at the leading edge of universal thought and experience. More good news: The integration of the three laws manifests joyous survival. There will never be an end to creation; we are eternal beings. More good news: We can never get it wrong, and we will never get it done. The following sections record Abraham's answers to questions about the three universal laws.

The Law of Attraction

Abraham speaks:

> The Law of Attraction is the most powerful law in the universe. What it says is, ***that which is like unto*** *itself is* ***drawn.*** You see it evidenced here in your society when you say, 'Birds of a feather flock together.' You see it evidenced when you wake up in the morning with a very bad day, and all through the day things get worse and worse, and at the end of the day you say, 'I should not have gotten out of bed.'
>
> You see the Law of Attraction in your society when you see that the one who speaks most of illness has it; when you see that the one who speaks most of prosperity has it. So the Law of Attraction is evident everywhere around you, if you understand what it is. The way we want you to understand it most significantly is when you understand that you are a magnet attracting unto you that which you are thinking and feeling. So, if you are feeling fat, you cannot attract thin. If you feel poor, you cannot attract prosperity, and so on, because it defies Law. When you come to understand that you are a magnet, attracting unto you, then and only then will it make sense to you to pay attention to what you are thinking. Then we say to you that you are the creator of your experience, and that you attract unto you through your thoughts, and through your words, which are an extension of your thoughts, and through your actions, which are also extensions of your thoughts.
>
> Literally, you are creating your experience. The greatest resistance that we receive about that is that there are so many who have those things in their experience that they don't want, and so they cannot believe that they would have created them. They say, 'Abraham, I would not have done this unto me.' And we know you would not have done it on purpose, but that is creation by default, which is putting the Law of Attraction to work by summoning, or soliciting, or inviting into your experience that which

you do not want, by thought-not understanding the rules of the game, so to speak. So we say, without exception, that which you give thought to is that which you begin to invite into your experience.

As we talk further about other recordings we have made and about other Laws, this Law of Attraction will become even more clear to you. For you are getting what you are thinking about, but we are wanting you to understand more fully how you may modify your thoughts and, more importantly, pay attention to the way that you are feeling. For monitoring thoughts is very time consuming. It is not an easy thing to do. You receive stimulation of thought so rapidly. We are not encouraging, even when you understand the Law of Attraction, that you monitor every thought. There is another process that will work even better for you. When you think a little thought of something you are wanting, by the Law of Attraction, that thought grows larger and larger and more and more powerful. When you think a thought of something you are not wanting, Law of Attraction adds to it, and it grows larger and larger also. So the larger it grows, the more power it draws unto it, then the more certain you are to receive the experience, yon see. We are not saying that every subtle little thought will manifest instantly in your experience; that is because of the buffer of time. But it does mean that it is setting forth the probability. And if you stay focused on the little thought long enough, it absolutely, under all conditions, will be yours.

The interesting thing about these Laws that we offer here is that they are, even if you do not understand that they are, affecting your experience, even in your ignorance of them. We do not want you to resist these words because they are strange, but we want you to ponder them, and then look into your own experience that you may see the correlation between what you are thinking and speaking and what you are getting. That way, you will accept the Law of Attraction as absolute, and begin to use it to your benefit, rather than to your detriment. (Hicks **&** Hicks, 1989).

The Law of Deliberate Creation

Abraham **speaks:**

The Law of Deliberate Creation says to *bring the vibration of one's belief into harmony with one's desire.* We have called this the Law of Deliberate Creation because we assume you want to create on purpose. But it is more aptly called the Law of Creation, for it works whether you are thinking of what you want or thinking of what you do not want; whether you are thinking of what you want or the lack of what you want. The direction of your thought is your choice, and the Law of Creation goes to work upon whatever it is that you are thinking about.

We want you to understand that there are seemingly two parts to manifestation because you are now in this physical existence. If you were only in the nonphysical, focused as we are, you would notice only half of the equation applying, for there is only the giving of thought and the receiving of the manifestation, simultaneously. But here in this physical dimension, with the buffer of time, there appear to be two parts of the equation. On one hand, the launching of the creation, with emotion to speed **it—** and on the other hand, the expecting, or the allowing, or the receiving of that which has been launched in the first place.

In this physical place, it is not easy for most of you to hear these words regarding creating through thought and to accept them wholly in the beginning, for you live in a physical world, and you have seen so many taking action to make everything happen. Certainly we do not deny that action is an integral part of the physical world in which you live. But we do say that, if you use the power of your thought to pre-pave, or set

forth thought in advance of that you are wanting to receive, as you are walking through space and time into your now, you will not have to take so much action to get things the way you want them to be.

We have noted that your hospitals are filled with those who are taking action to compensate for inappropriate thought. They did not create the illness on purpose, but they did create it through thought, and through expectation. Then, they go to the hospital to take physical action to compensate.

We also see many spending their day exchanging their actions for dollars because the dollars are essential to the freedom of life in this society. Yet we know that in most cases the action is not action in Joy, and yet, it is a compensating action in the now.

What we want to do with this recording is to stimulate you to the awareness that, of course, you are taking action now. You have intended action. That is part of the deliciousness of this physical world in which you live. But you did not intend to do your creating through action. You intended to do your creating through thought, and to enjoy that which you have created with your body. If you understand that as you set forth thought in advance with positive emotion, you have launched your creation, and then you walk through space and time toward that the future, expecting that it will be there. Then we say to you, from that joyful creation that you have launched into the future, you will be inspired to the action that is action in Joy. And that is our point. When you are taking action in your now, and it is not action in Joy, it is our absolute promise to you that it will not lead to a happy ending. It cannot. It defies law.

Rather than being so ready to jump into action, to do, to go and get the things that you are wanting, think them into being, see them, visualize them and expect them—and they will be. And you will be guided, or inspired, or led to the perfect action that will bring about the process that will lead you to that which you seek.

There is a great difference between that which we have spoken, and the way most of the world is going about getting what it wants. (Hicks & Hicks, 1989)

The Law of Allowing

Abraham **speaks:**

"The Law of Allowing is that an individual must *discover harmonious vibration to desire.* We have put the Law of Allowing in this order, following the Law of Attraction, first, and the Law of Deliberate Creating, second, because the Law of Allowing cannot begin to be understood until the first two are understood.

What we mean by the Law of Allowing is, 'I am that which I am, and I am pleased with it, Joyful in it. And you are that which you are, and although it is different, perhaps, than that which I am, it is also good. Because I am able to focus upon that which I want, even if there are those differences between us that are dramatic, I do not suffer the negative emotion because I am wise enough not to focus upon that which brings me discomfort. I have come to understand, as I am one who is applying the Law of Allowing, that I have not come forth into this physical world to get everyone to follow the truth that I think is the truth. I have not come forth to encourage the world into a world of conformity or sameness, for I am wise enough to understand that in sameness, in conformity, there is not the diversity that stimulates creativity. And that in focusing upon bringing about conformity, I am pointed toward an ending, rather than a continuing, of creation. So Law of Allowing is absolutely essential to the continuation or the survival of this species, of this planet, of this universe, you see. Not only that, when 1 do not allow myself, I feel rotten. And when I do not allow another, I feel rotten.' That is the basis behind Law of Allowing."

> Allowing is not in the sense of tolerance, for when you are tolerating another, you are not letting that person be. You are letting them go ahead in doing what they do, but you do not like it. You are still binding yourself with the negativity.
>
> You may ask how you can protect yourselves from others that might invade your space. Before you can understand and accept the Law of Allowing, you must first understand the Law of Attraction and the Law of Deliberate Creation. For certainly if you do not understand how something is coming unto you, you are fearful of it. If you do not understand that another cannot come into your experience unless you invite them through thought, then of course you would worry about the others and what the others are doing. But when you understand that nothing will come into your experience unless you invite it through thought, unless you invite it through emotional thought and great expectation, unless you actually accomplish this delicate creative balance, you will not receive it.
>
> When the Law of Allowing is understood, when the Law of Deliberate Creation is understood, when the Law of Attraction is understood; then, there is no longer a need for walls, or barricades, or armies, or wars, or jails. For then you understand that you are absolutely free to create around you the world that you want. And you are not feeling such a responsibility or such an urge to contain or control the others. For you understand that they are also in the process of creating their world around them.
>
> In this physical world in which you are focused, even in this universe of which this physical world is a part, there are those things with which you are in absolute harmony, and there are those things in which you are in absolute disharmony, and there is some of everything in between. But you have not come forth to destroy or contain that which you do not agree with, for that is a changing thing. Instead, you have come forth to identify, moment by moment, segment by segment, day by day, year by year, what it is you want-to use the power of your thought to focus upon it, to use the power of the Law of Attraction to draw it unto you. The other way doesn't work. Have you noticed? For they cannot find a way of containing a changing thing. And who gets to choose who is right, anyway? (Hicks **&** Hicks, 1989)

III. CONCLUDING STATEMENT ON JOY-BASED PSYCHOTHERAPY, COMPATIBILITY

The first cause of our individual presence in this lifetime and in the universe is spirit. Some synonyms for spirit are Holy Spirit, higher self, inner being, aspect of God, Source, universal consciousness, soul, or soul of our being. Inner being is the term Abraham uses, and it seems to be the most psychologically simple and communicative of these synonymous terms.

Our inner being communicates with us constantly, through our feelings, or emotion. Feeling-emotion, not words, is the medium and the message of spirit. If we are feeling some aspect of joy or unconditional love, we are connected to our inner being. If we are feeling some form of fear (worry, anxiousness, depression, anger, jealousy, etc.), we are partially separated, or pinched off, from our inner being through default or "stinking thinking."

By dwelling on our past/present problems and illness, as conventional psychotherapy does, rather than dwelling on some aspect of a joyous future or a

grateful now, we make our fear-based past a continuing now. Thereby, we "attract" (as in the law of attraction) a continuing nonjoyous and habit-based experience; and we do not "allow" (as in the law of allowing) the power of the now, or the power of our inner being, to "cocreate" (as in the law of deliberate creation) a joyous present and future.

We have been trained to manifest through ego struggle and doing. Our inner being can manifest our desires much more efficiently, effectively, and abundantly, but only if we "be" in a joyous state of "allowing," rather than in a habit-based state of "doing." Our usual "doing" is ruminating on a fear-based past or worrying about a fear-based future.

We choose our own reality, consciously or nonconsciously. In each moment, we can choose what we want to feel. If we are not feeling joy, we can choose again. We always have the freedom to choose a better thought or vision. What we are thinking or envisioning and what we are feeling are always a match, and the thinking/feeling vibration or tone we create determines the manifestation-illness or health.

Well-being is consciously allowing joy, freedom, and growth. Abraham teaches that the basis of your life is freedom, the objective of your life is joy, and the result of your life is growth.

Well-being is our birthright. For example, in a recent Abraham-Hicks workshop, a physician stated that he felt that a "transition" was needed in his thinking and a "different way" was needed in his understanding of illness (Hicks & Hicks, 2001).

Abraham responded:

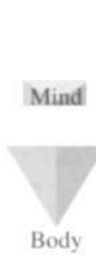
> "What happens when you are involved in physical experience in a very detailed way is that ... we talked earlier about post-manifestation. In other words, when you are looking at manifestation, which is *after* the energy has flowed, you don't have much power there. The thing about medicine or the thing about physical well-being that you are hearing rumblings about, and this is where the great transition will begin to take place, is that there is so much energy and talent and dollars that are put into finding cures. But there is very little spoken about, 'Begin with holding yourself in the vibrational place (of Joy), and allowing the well-being (to flow).' It varies from place to place, but in almost all medicine in this culture, and the predominant attention that is put toward medicine, is put toward pushing against the part of it that is not wanted, rather than allowing the part that is wanted. It takes enormous effort that never gets you anywhere when you are pushing against what isn't wanted. and it is a much simpler thing than most people are willing to allow to find a way of allowing the well-being that would be there otherwise. (Hick & Hicks, 2000b).

In a recent issue of *Alternative Therapies,* Eugene Taylor posed what could be called the Harvard riddle:

> Mind-body medicine expands the breadth of this inquiry (of new lines of entry) by investigating the larger and more fundamental philosophical question at the heart of

> the interaction between psychology and physiology as well as medicine and religion; namely whether voluntary control over our own internal states of consciousness is that long sought-for but still missing link between matter and spirit. (Taylor, 2000)

A joy-based psychotherapy resolution to the Harvard riddle would be: Spirit-emotion is the precursor to the mind-body interface; emotion is the guidance system to the mind-body interface, and these four core aspects of life are best represented through the form and balance of a tetrahedron:



Abraham teaches that you can control the vibration you are emitting under any and all conditions, and that unconditional love really means that you have found a way to focus to achieve a vibration that truly allows the loving being that is really you to flow, no matter what. We know we have achieved "allowing" when we can allow someone who is not allowing us; and we have not quite "got it" when another makes us feel defensive (Hicks & Hicks, 2000d). As communicated in the Introduction to A *Course in Miracles,* unconditional love is a required course; we can only elect when to take it (The Foundation for Inner Peace, 1976). As communicated in *Communion with* God, love is not created as a result of certain conditions; certain conditions are created as a result of love. Beingness precedes experience and produces it (Walsch, 2000). Therefore, we do have total and voluntary control over our own internal states of consciousness.

IV. RELEVANCE FOR MENTAL HEALTH OF JOY-BASED PSYCHOTHERAPY

In its call for *The Creation of a New Specialty,* the founders of American Board of Holistic Medicine state, "Holistic Medicine is based on the core belief that unconditional love is life's most powerful healer" (American Board, 2000). As previously stated, joy-based psychotherapy is an epochal health and healing modality founded on an elegant trilogy of new scriptures

that are all about unconditional love. These three transmitted thought systems establish for the first time in Western medicine a holistic and internally consistent psychology and cosmology that can be used in the trenches of clinical medicine. The Abraham thought system, particularly, is so user-friendly that most patients can directly use the materials as a self-study course in psychotherapy. In the absence of an internally consistent psychology and cosmology, a holistic proposal for mental health is not possible. Therefore, joy-based psychotherapy is an "original science" in psychology and holistic medicine.

We experience only two core emotions: love and fear (The Foundation for Inner Peace, 1976). There are many aspects of love: joy, gentleness, freedom, growth, passion, gratitude, connection, clarity, enlightenment, etc.; and there are many forms of fear: guilt, depression, anxiety, worry, shame, blame, victim, anger, etc. Joy, well-being, and unconditional love are our birthright. If we are not fully experiencing joy, we can reclaim our birthright-now. Joy, so be it.

V. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

By definition and experience, joy-based psychotherapy supersedes safety, compatibility, and contraindications as we have known them in conventional care. There is not a contraindication to joy, and there is only a relative contraindication to fear-based thinking and illness.

Safety, as most conventional human biologists and psychologists perceive it, takes on a higher perception of reality with the awareness that there is no death, or end of personal growth and expansion. As Abraham teaches, we "croak" and recycle into the stream of well-being and unconditional love that is always there, is always available, and is always everywhere; we are eternal beings. However, we do not need to "croak" to lift the veil of perception of separation from our source. If we choose to lift the veil in this lifetime, we are then described as an enlightened being or a master. Perhaps a "more enlightened" being is more precise. "Enlightened[7]' in this way means the ever-expanding experience of conscious communion with our inner being or source, and "master" means to experience unconditional love of self and other.

Joy-based psychotherapy is compatible with advanced conventional care that encourages patients to take responsibility for their own lives. The author has found that the World Wide Web is very useful for orientation of new patients to these ideas, because most new patients who are aware of

advanced biomedicine are Web literate (Wyker, 1997), and they usually come to his practice appreciating the wisdom of taking responsibility for their own lives. Thereby, transference is seldom an issue and compliance is enhanced (Wyker, 2000b).

Of course, to implement one of these thought systems therapeutically, without an implied or direct patient-client request, would be contraindicated. Even given such a request, these thought systems are just another way of looking at things. They may be elegant scriptures, or a body of spiritual writings considered to be entitled to credit, but they should not be considered "holy" or "infallible" scriptures. A thought system can be authoritative, or entitled to credit or acceptance, without any need to be authoritarian.

VI. RESEARCH/EXPERIENCE AND VALIDATION

To the author's knowledge, there have been no systematic or controlled studies or validation data addressing any of the three spiritual thought systems described in this chapter. Therefore, the scale marker of scientific documentation as applied to the mental health modalities presented in this book would be a number 1 rating at this time for joy-based psychotherapy. The number 1 rating profile is: Credible hypothesis, or collateral support of wide clinical experience, needs pilot data.

Because each of these freestanding thought systems has been so empirically successful through worldwide personal experiences and word-of-mouth recommendations, one could ask, Why "go there" with validation studies? The author's response to this question is, "Why not?' A lot of well-intended practitioners would be open, or open sooner, to joy-based psychotherapy if valid validation occurred, and health outcomes studies are an advanced validation system that lend themselves to such assessments in holistic medicine.

Health outcomes studies are based on our patients' self-reported data and functional measurements. Other assessment tools, such as claims data, do not give results on how patients feel or how satisfied they are with their symptom complex. Health outcomes studies have been systematically created and scientifically validated by Medical Outcomes Trust, Inc. of Boston (Medical Outcomes, 1996). The Integrative Health Institute is a good source for practical health outcomes measurement and management in day-by-day primary care of patients (Integrative Health, 2000).

Joy-based psychotherapy practitioners are justifiably skeptical of random crossover studies because of the powerful effects of the law of attraction on both the observer and the observed, otherwise known as the placebo effect. For the past 30 years, scholars in humanistic psychology and transpersonal

psychology have led the way in questioning the mechanistic science and stranglehold that behaviorism has held on mainstream academic psychology. Now, the universal law of attraction explains why so-called blind studies are not blind.

The Holistic Healing Institute is an education and research foundation whose purpose includes sponsorship or facilitation of workshops for practitioners in each of the three thought systems described in this chapter (Wyker, 2000a).

The Institute's purpose also includes implementing a spirit-emotion focus on research in clinical medicine. For example, the notion of zero-morbidity is a fascinating and yet pragmatic concept. The advanced spiritual thought systems that are described in this chapter explain the conditions for life without morbidity and for reversing morbidity and senescence. Even though such a premise is a stretch for most physical beings on this planet at this time, it is the way of life for higher evolved physical beings in other parts of the universe (Walsh, 1999). Advanced biomedicine even now speaks of "compressing morbidity," as proposed by James Fries, MD, of Stanford University (Fries, 1980). Even though Fries' theories received a lot of criticism from conventional medicine, they were validated again 18 years later (Vita, Terry, Hubert, & Fries, 1998). Jeffery Bland, PhD, of the Institute for Functional Medicine also speaks of "squaring the morbidity curve." A search of this subject on the Institute's Web site finds 1648 documents (Bland, 1999). A zero-morbidity project would include aligning awareness, documenting outcomes, and assessing reproducibility of such phenomena (Wyker, 2000a).

VII. SIMPLE TREATMENT: COMMON TREATMENT APPROACHES FOR DEPRESSION, ANXIETY, ADD/ ADHD, AND ADDICTIONS

A joy-based psychotherapy statement about treatment for depression, anxiety, attention-deficit disorder (ADD), attention-deficit hyperactive disorder (ADHD), and addictions might be that depression and anxiety are not a selective serotonin reuptake inhibitor (SSRI) deficiency, they are a joy deficiency. For example, a teenager with destructive behavior and ADHD had the following interaction with Abraham in an Abraham-Hicks Workshop:

> Abraham: 'When you used those words, we could feel within your vibration a self condemnation that is so much bigger than any of the actions even begins to deserve, and yet the repeating of those words and the repeating of those thoughts hold you in a place that doesn't allow the energy to flow. It's a strange thing. It's like believing that, 'I have this stuff within me that's causing me to do this destructive stuff.' And what we

want you to understand is that it's your condemnation of the destructive stuff that is the only part of the disallowing that we can feel within you. It's like saying, 'I've got this habit that is holding me in this place that I don't want to be.' And we say, it is your belief that the habit is bad that is holding you in a place that you don't want to be, much more than the habit itself

Questioner: 'So I'm fearful of what I can be if I let go of that?'

Abraham: 'Yes. It's the condemnation around you that is the bigger issue. So what we would like you to do is find a way of being, even in the process of what you consider to be the destructive behavior, and loving yourself, anyway, right within the middle of it. And then that behavior that has been formerly called destructive wouldn't be so anymore. Isn't that an interesting thing?'

Questioner: 'That was the quantum leap. Yeah.'

Abraham: 'How is it that you come to label something "destructive behavior?" Did someone else give you the label?'

Questioner: '… yes . .. *

Abraham: 'Well, we would like to say to you that their wanting to pigeonhole you all and put you in the same place is the most destructive behavior that we witness on your planet. It is their behavior that is destructive. But pushing against their destructive behavior, or pushing against your destructive behavior, still holds you in a place of not allowing your own well-being. So whether you call it blame or guilt, it is still not allowing well-being. So, what we would do is just find something to get excited about that takes your attention away. Have you ever said to a child, "Watch out, you are going to spill your milk"? It's as if you gave them that assignment, and they fulfill it. And so, when you have labeled yourself in any way, you and others have given you an assignment that you are almost sure to fulfill. That's why we want to thank you. The label is misplaced. It's bigger than you deserve. So just release the label and allow the well-being' (Hick & Hicks, 2000c)

VIII. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

The purpose of the Holistic Healing Institute includes sponsorship or facilitating sponsorship of workshops for practitioners in each of the three thought systems described in this chapter (Wyker, 2000a).

Certification is best done by a traditional boarding and certification process, such as the American Board of Holistic Medicine. Health outcomes studies are cost-effective and lend themselves optimally to assessments of holistic healing and, therefore, a recertification process. They are office-based and, thereby, reestablish a primarily direct practitioner-client relationship rather than primarily a third-party relationship. For example, two pillars of joy-based psychotherapy are "to soothe" and "to facilitate." These features can be described, taught, and assessed through virtual and real practitioner-client interactions, and recertification can become an ongoing educational and nonpunitive experience. Thereby, a federation of independent holistic healing practitioners could contract directly with patients for health services

on a fee-for-service or prepaid basis. The cost benefits to patients from such a federation would be immense. Such a federation could be sponsored by any medical or mental health professional membership organization and could allow each member-practitioner to vote directly for herself or himself on major issues (Wyker, 2000b).

IX. CONCLUSION

Joy-based psychotherapy, particularly the Abraham thought system, offers a way for medical and mental health providers to integrate the spirit-emotion-mind-body model into their treatment programs and cogently use the emotion aspect as the patient's guide in healing. The Abraham thought system, which teaches that the object of life is joy, the basis of life is freedom, and the result of life is growth, gives us a different way of understanding illnesses, how they manifest themselves, and how to treat them. This form of therapy is in contrast to conventional illness-based psychotherapy and fear-based religious teachings, and is compatible with advanced conventional care that encourages patients to take responsibility for their own lives.

When offered by an aware and well-intended practitioner, joy-based psychotherapy is a pragmatic, beneficent, and advanced approach for treatment of mental-physical conditions. Although formal validation studies, particularly health outcomes studies, of this psychotherapeutic modality are called for, the author's personal and professional experience has been that this system of psychotherapy is effective and, from a holistic perspective, elegant.

X. RESOURCES

A Course in Miracles; Foundation for Inner Peace, PO Box 635, Tiburon, CA 94920; www.miraclecenter.org.

Conversations with God; Re-creation, PMB 1150, Ashland, OR 97520; (541)482-8806; www.conversationswithgod.org.

Abraham-Hicks Publications; San Antonio, TX; (830)755-2299; www.abraham-hicks.com.

Medical Outcomes Trust; PMB #503, Boston, MA 02116-4705; (617)426-4046; www.outcomes-trust.org.

Institute for Functional Medicine; PO Box 1729, Gig Harbor, WA 98335; (253)858-4724; www.fxmed.com.

American Holistic Medical Association; 6728 Old McLean Village Drive, McLean, VA 22101-3906; (703)556-9245; www.holisticmedicine.org.

American Board of Holistic Medicine; PO Box 5388, Lynnwood, WA 98043; (425)741-2996.

Association for Transpersonal Psychology; PO Box 29030, San Francisco, CA; (415)561-3382; www.atpweb.org.

Association for Humanistic Psychology; 1516 Oak Street, #320A, Alameda, CA 94501-2947; (510)769-6495; www.ahpweb.org.

Institute of Noetic Sciences; 101 San Antonio Road, Petaluma, CA 94952; (707)775-3500; www.noetic.org.

Holistic Healing Institute, PO Box 22770, Carmel, CA 93922; Fax: (831)625-0467; www.h-h-i.org.

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Chapter **15**

Eye Movement Desensitization and Reprocessing (EMDR)

William M. Zangwill, PhD
JessicaPearson, **MA**
Phyllis Kosminsky,PhD

Handbook of Complementary and Alternative Therapies in Mental Health

Though it had been more than seven years, Lisa could still remember the moment as if it were yesterday when the man had grabbed her from behind and raped her. Intellectually, she knew she was safe. The rapist was in jail hundreds of miles away. Yet she was still frightened-afraid to go out at night and anxious when approached by any man she did not know. Almost as painful as the vivid memories of the assault was the negative way in which she judged herself: "Why am I such a wimp?" she would often ask. "What's wrong with me that I still let this bother me? "

Author's files

I. OVERVIEW

This example illustrates a problem that has long concerned and frustrated many therapists and their clients. Why don't intellectual awareness and insight produce more significant emotional and behavioral improvement? Zajonc (1980) suggested this is because emotions and cognitions are processed in different areas and by different structures in the brain. The work of LeDoux (1989), Davis (1992), and others has shown that Zajonc was right: There are separate structures and circuitry in the brain where emotional processing takes place. Unfortunately, most traditional therapies have not sufficiently integrated the treatment implications of this research. This is problematic, because, as Rachman (1981) stated in response to Zajonc's article, "If words and techniques which are predominantly verbal in nature are inappropriate or at least insufficient media for entering the affective system or for modifying its functioning, we need to consider alternative modes and media." (p. 285)

Some mental health practitioners, however, have recognized the need for more integrative, holistic models of psychotherapy (Lazarus, 1985; Young, 1995; Shapiro, 2001, in press) that focus on the variety of ways in which we process and store information-affectively, physiologically, and sensorially, as well as cognitively. One of the most comprehensive and best-researched of these models is Shapiro's (2001, in press) eye movement desensitization and reprocessing (EMDR) model.

A. HISTORY

In the mid 1980s, Francine Shapiro reported that while walking in a park, she became aware of a decrease in emotional pain connected to some disturb-

ing thoughts she had been having. Serendipitously she noticed that her eyes had been moving back and forth while this was happening. She then brought up some additional disturbing memories and purposefully moved her eyes back and forth. Once again she noticed a marked decrease in the level of upset associated with these previously painful memories.

Recognizing the potential benefit of this discovery, she conducted her initial research on EMDR with 22 traumatized individuals (Shapiro, 1989). Her results suggested that EMDR could reduce the pain associated with traumatic memories. In addition to the desensitization that occurred, EMDR produced a shift in the individual's evaluation of self from negatively held beliefs (I am weak; I am worthless; I deserve to be hurt) to a more realistic, more balanced view of oneself (I did the best I could; I am lovable; I am still a good person even if I make mistakes; I am safe now).

The initial results and claims made by Shapiro (1989; 2001) aroused a storm of controversy that persists to this day. Critics questioned the claims she made, the data she reported, and the use of eye movements as part of a therapeutic method. While Shapiro's initial research had several methodological limitations, more methodologically sound replications of her work have generally supported the positive results she obtained (see Section IV). Today, EMDR is one of the fastest growing methods of psychological treatment with more than 65,000 clinicians trained worldwide. Its primary use is for the treatment of trauma and post-traumatic stress disorder (PTSD), but, as will be discussed later, it has been successfully used to help clients with a wide variety of other problems, such as phobias, anxiety, and performance difficulties.

B. BASIC PRINCIPLES

Consistent with many psychological therapies, EMDR assumes that most problems arise from faulty learning. In EMDR, however, the concept of learning is defined very broadly. Learning is viewed as a process that is not only cognitive, but sensory, affective, and physiological as well. This more holistic view of learning and information processing is one of the factors that distinguishes EMDR from many other therapies.

Another factor that differentiates EMDR from other approaches is its emphasis on the positive as well as the negative. Most conventional psychotherapies, like traditional Western medicine, focus on identifying and treating pathology. This focus on pathology can sometimes eclipse the client's strengths, emphasizing instead his or her weaknesses. Such an emphasis may be particularly ill advised in the case of trauma, in which individuals may already feel

helpless and out of touch with the very internal resources and strengths they need in order to recover.

As noted, EMDR is designed to target change on multiple levels: cognitive, emotional, and physical. In this respect it differs from many clinical approaches that assume that change in one area-thoughts, feelings, behaviors, or body sensations - will produce change in the others. Thus, analytic theory assumes that a working through of transference in analytic treatment will ultimately lead to a shift in the way the client functions in the world. Cognitive therapists assume that challenging and changing the client's irrational negative cognitions will produce significant changes in the way the client feels and acts. Practitioners of energy therapies assume that unblocking the flow of energy or chi should be the major focus of treatment and will produce significant improvement in other areas.

In contrast, EMDR begins with the assumption that the best approach to change is an integrative one. In keeping with the increasing recognition of the body-mind connection in Western medicine (Weil, 1995; White, 2000) and in the mental health community, EMDR synthesizes and draws from many branches of psychological theory and treatment.

Another fundamental assumption of EMDR treatment is that human beings have an emotional healing system comparable to the body's immune system. Often, this system is adequate to process the small hurts and splinters of life. Sometimes, however, the wounds are so large or so deep that the person's ability to recover is overwhelmed. When this happens, the body, or mind, is unable to repair the wound on its own. In the case of psychological trauma, what appears to occur is that material is stored in the nervous system in an unprocessed, state-specific form. The individual may or may not be consciously aware of its presence until it is triggered either by internal (dreams, feelings, thoughts, body sensations) or external (sounds, smells, images, movement) stimuli. Once triggered, the individual may reexperience many or all of the thoughts, feelings, or body sensations that were present during the initial trauma. This retraumatization can occur repeatedly and without warning. Try as they may, individuals often cannot "get over" what has happened, cannot reconstitute their former sense of psychological health. In these cases, EMDR often enables clients to recover by activating and boosting their own emotional healing system.

A final underlying assumption of EMDR is that significant change can take place at a much more rapid rate than previous therapeutic models would suggest. Research and clinical experience suggest that information processing, using EMDR, can occur at an accelerated rate. Conceptually, this makes sense, for if the EMDR process involves connecting information from one

neural network in the brain to another, how long need that take? If a client has the intellectual information that he or she is safe now and EMDR helps connect that information to an emotional network in another part of the brain, is it not possible that relief may occur rapidly? In the case of a single event trauma, sometimes as little as three sessions are needed to desensitize and reprocess the event (Marcus *et* al., 1997).

In summary, EMDR is a therapeutic modality that follows the basic principles of many therapies, including the importance of establishing a good relationship with the client, taking a thorough history, and developing agreed-upon goals. Like many other therapies, EMDR assumes that most problems are based on faulty or painful learning. It differs, however, in the holistic view of learning, the provision of unique, alternating stimulation, and the way it seeks to incorporate these features into the treatment approach.

C. MECHANISMS OF CHANGE

To change dysfunctional beliefs and reduce irrational fears, EMDR accesses both intellectual and emotional informational networks. This is accomplished by having clients bring up the visual, cognitive, emotional, and physiological aspects of a problem or memory, as well as alternative adaptive cognitions. It then adds a new element, usually therapist-led rapid eye movements, alternating hand taps, or aural stimulation, which accelerates the processing of information.

Several factors appear to increase the effectiveness of EMDR: a caring and supportive therapeutic relationship; complete accessing of painful material including images, negative thoughts, feelings, and body sensations; and the provision of some type of alternating stimulation mentioned earlier. But basically we do not know why EMDR works. Some (Stickgold, in press) have speculated that the eye movements might produce a REM-like phenomenon. Others (Lipke, 2001, personal communication) suggest that the alternating stimulation might serve to weaken the strength of the conditioned response as described in Pavlov's (192711960) classical conditioning model. Changes in brain response have been reported post-EMDR treatment (Levin *et al,* 1999). Why this occurred, however, is still unknown.

D. CURRENT TRENDS AND STATUS

Though still controversial in some circles, EMDR is an increasingly accepted form of treatment. It has been approved for the treatment of PSTD by the International Society for Traumatic Stress Studies, and the EMDR

International Association annual conference draws clinicians and researchers from around the world.

Efforts have also been made to bring the benefits of EMDR to those who can often least afford it. The nonprofit Humanitarian Assistance Program (HAP) provides EMDR treatment to disaster victims at low or no cost and offers EMDR training to clinicians who work with these victims. These training programs have been conducted throughout the world and have included training mental health professionals with UNICEF in Bangladesh, training staff at the Women's University in Bombay, and working with traumatized Kosovaran refugees in Germany.

EMDR is also an increasingly accepted form of treatment not only for trauma-related conditions but also for chronic problems such as anxiety, low self-esteem, and impaired personal or professional development. Success in treating these clients with EMDR has encouraged the development of a broad spectrum of EMDR applications for use with children, couples, sufferers of phantom limb pain, obsessive compulsive disorder (OCD), and substance abuse (see Manfield, 1998).

One of the most exciting new trends has been the use of EMDR not just to relieve suffering but to promote and enhance quality of life. EMDR has been used to help athletes, artists, and businesspeople enhance their performance, and most recently the potential benefits of combining EMDR with meditation have been explored (Zangwill, 200 1).

II. RELEVANCE FOR MENTAL HEALTH

As a method of psychotherapy, EMDR has tremendous relevance for mental health. It has been proven to reduce pain in a number of different areas, but the primary focus of EMDR continues to be in the treatment of PTSD.

PTSD can severely affect all aspects of a person's functioning, including interpersonal relationships, occupation, and physical and psychological well-being. Some of the symptoms of PTSD are nightmares, flashbacks, exaggerated startle response, detachment from others, avoidance of certain activities, and hypervigilance (APA, 1994). Previously, these symptoms lasted for years, impervious to treatment (Seligman, 1993).

Prevalence rates of PTSD are estimated to be as high as 6-15% of the population (Kessler *et ai,* 1995; Breslau *et ai,* 1998). These figures suggest that millions of people in the United States and tens of millions throughout the world who have experienced rape; child sexual and/or physical abuse; criminal violence; loss of a loved one; an automobile, train, or airplane accident; natural disaster; or combat may be suffering from PTSD. Given the frequency

and severity of this disorder, EMDR's value as one of the few treatments shown to be effective in the treatment of PTSD is clear.

EMDR has also been used successfully to treat other psychological disorders. Research has evaluated EMDR's use with phobias, panic disorder, body dysmorphic disorder, and depression (see Section IV). In addition, EMDR has been helpful with clients who are stuck emotionally, such as with grief and loss, because of its usefulness in accessing and resolving painful, often conflictual feelings.

As mentioned, in addition to focusing on pain and pathology, clinicians have recently begun using EMDR to enhance individuals' quality of life—occupationally, socially, and spiritually. Two specific areas include performance coaching and meditation. In the area of performance enhancement, EMDR therapists have worked with athletes and actors both to remove blocks that may be inhibiting their performance and as a powerful form of cognitive rehearsal (Foster & Lendl, 1996).

The combination of EMDR and meditation has been truly synergistic. Clinicians have reported that the addition of meditative practice to EMDR work has enhanced clients' feelings of safety and well-being, enabling them to better cope with disturbing material that may arise both during and between sessions (Zangwill, 2001).

The curative power of EMDR has the potential to be of great value to those who meditate. We know that some are drawn to meditation in an effort to cope with their unresolved wounds. Sometimes meditation helps heal these wounds; other times it does not. Kornfield (1993), in fact, has estimated that at least half of the participants in his advanced study meditation program are unable to do traditional meditation because of unresolved psychological problems.

This last fact should not be surprising to anyone who has practiced meditation. The journey inward often involves risk and pain. For some, the discovery of this pain may feel like too much to bear, and they withdraw from it, leaving the splinters from these old injuries behind. By moving the client toward, instead of away from, these hurts, and by offering a way to remove these old splinters, EMDR seeks to relieve the suffering these old wounds cause and enhance the person's meditation practice.

III. SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

A. SAFETY

When conducted by well-trained clinicians who take care to perform a thorough assessment of the client and his or her problems, EMDR has been shown

to be both a safe and an effective therapeutic intervention. The reprocessing and desensitization of extremely painful events and memories, however, can generate strong emotions, which may be frightening to the client (and, in some cases, unsettling to the therapist). Thus, in addition to establishing a supportive therapeutic relationship with the client, it is important for the clinician to take whatever time is necessary to train the client in the use of affect management skills that can be applied both during and between sessions.

B. COMPATIBILITY WITH CONVENTIONAL CARE

EMDR encourages the use of adjunctive methods of treatment when needed, including behavioral skill training, meditation, role play, couples and family therapy, and, in some instances, medication. These adjunctive methods can be especially useful in helping transfer the gains made during EMDR sessions to the natural environment.

C. CONTRAINDICATIONS

The very power of EMDR to evoke intense emotions suggests that there are some situations where it should be used with caution. Such situations include working with physically frail clients, pregnant women, and clients with a history of seizure disorders. Psychologically frail clients, especially those with severe dissociative tendencies or a history of substance abuse, should be treated only by an experienced EMDR clinician, as there is some risk that the procedure might overwhelm them or cause regression.

Clinicians need to consider the risk involved in using any powerful method of treatment. The emotional distress we seek to relieve with EMDR is in many cases so deep and so intense that it cannot be released without the client experiencing some pain. Yet if we choose not to take these risks, we may be depriving clients of a future in which they can live without that pain and the emotional and spiritual distortion that it produces.

IV. RESEARCH1 EXPERIENCE, L E V E L O F SCIENTIFIC DOCUMENTATION: PTSD = 5; OTHER AREAS = 3

To date, several controlled studies and many case reports have evaluated the use of EMDR in the treatment of a variety of disorders. While the strongest research has been done with PTSD, other research has also evaluated the

usefulness of EMDR in the treatment of a wide range of psychological disorders, such as phobias (Kleinknecht, 1993; Lohr ***et al***, 1995 1996; Muris ***et al***, 1998), panic disorder (Feske & Goldstein, 1997), body dysmorphic disorder (Brown ***et al***, 1997), and depression (Manfield, 1998).

A. POST-TRAUMATIC STRESS DISORDER (PTSD)

Since Francine Shapiro's (1989) original study, 12 controlled studies (Maxfield, 1999) and hundreds of case reports have evaluated the effectiveness of EMDR for the treatment of PTSD. Based on the results of these studies, three reviews (Chambless ***et al***, 1998; Feske, 1998; Spector & Read, 1999) and a meta-analysis (Van Etten & Taylor, 1998) have concluded that EMDR is an efficacious treatment for PTSD. In addition, Chemtob ***et al*** (2000) gave EMDR a rating of A/B (range A-F as defined by the Agency for Health Care Policy and Research), which defines it as an empirically validated treatment for PTSD.

Of the many studies evaluating EMDR, the following are the most methodologically sound in terms of adequate sample size, random assignment, standardized measures, and control groups (Spector & Read, 1999). Wilson ***et al*** (1995) randomly assigned 80 subjects, who had experienced a wide range of traumatic events, to either an EMDR or a delayed-treatment group. At post-treatment, the EMDR group showed decreases in symptoms related to the trauma and increases in positive cognitions, as measured by self-report and independent assessor. By the 3-month follow-up, the positive effects were maintained and the control group was also treated with EMDR, again with significant improvement across measures. In their 15-month follow-up (Wilson ***et al***, 1997), the researchers found that 84% of those diagnosed with PTSD who had received EMDR treatment no longer met criteria for the disorder. In addition, there was a 68% decrease in PTSD symptoms across all EMDR group subjects.

Rothbaum (1997) looked at the effectiveness of EMDR as compared to wait list controls with a group of 18 sexual assault victims diagnosed with PTSD. After four sessions of treatment, the EMDR group demonstrated significant improvement on depression and PTSD measures as assessed by an independent evaluator. By the 3-month follow-up, only one of the subjects (10%) from the EMDR group met criteria for a diagnosis of PTSD, while seven (88%) of controls did.

Marcus ***et al*** (1997) compared EMDR to a standard care (SC) protocol in an HMO setting, with 67 patients diagnosed with PTSD. These patients had experienced an array of trauma, from rape and incest to natural disasters. The

participants who were treated with EMDR evidenced greater reductions on measures of PTSD, anxiety, and depression, as assessed by a self-report and independent evaluator. Furthermore, the EMDR group showed significantly faster improvement than the SC group and needed fewer medical appointments after treatment. At post-treatment, only seven individuals (23%) from the EMDR group still met criteria for PTSD (compared to 50% of the SC group) and the authors noted that these seven all had had multiple or ongoing traumas and may have needed more extensive treatment.

In a randomized study of 35 combat veterans, Carlson *et al.* (1998) compared EMDR treatment to wait list and biofeedback relaxation groups. The EMDR group had significantly less anxiety, depression, and PTSD symptoms than the wait list at post-treatment and both wait list and biofeedback groups at the 3-month follow-up. In addition, by the 9-month follow-up, 78% of the EMDR group no longer met criteria for PTSD, with the EMDR subjects reporting greater improvement and treatment satisfaction over the other groups.

These studies, in addition to several others (Wilson *et al.,* 1996; Scheck *et al.,* 1998;), demonstrate the efficacy of treating trauma and PTSD with EMDR. As Spector and Read (1999) noted in their review, ".. . when EMDR is directly compared with the best available treatment for PTSD (exposure therapy-Foa & Rothbaum, 1996), EMDR and traditional exposure therapies appear roughly equal in effectiveness . . ." (p. 171). While equal in effectiveness, EMDR is typically a much less painful procedure for both the clinician and the client to endure. Exposure therapy requires that both individuals continually focus on the most painful aspects of a trauma in excruciatingly vivid detail. EMDR does not require this, and as a result is usually less painful for therapist and patient alike (Lipke, 1994). Thus, while EMDR and exposure therapy may have obtained roughly equal positive results, as Rothbaum (1997) has pointed out, ". . . the quickest, least painful effective treatment is the most desirable" (p. 3 19).

B. OTHER APPLICATIONS

In addition to its use for PTSD, EMDR has been applied to a wide variety of psychological disorders, such as anxiety, phobias, and depression. However, the research in these areas is not as strong as the research on PTSD, and some studies have reported inconclusive results (see De Jongh *et al.,* 1999, for a review).

Some studies have supported EMDR's efficacy with phobias. Positive results have been seen with blood and injection phobia (Kleinknecht, 1993),

claustrophobia (Lohr *et al,* 1996), spider phobia (Muris & De Jongh, 1996), and medical phobia (Lohr *et al,* 1995). Several controlled studies have also assessed the effectiveness of EMDR with specific phobias (Bates *et al,* 1996; Muris *et al,* 1997; Muris *et al,* 1998) and have reported mixed results. Some of these studies, however, have been methodologically flawed. For example, in the Bates *et al* (1996) study, the therapist was not formally trained in EMDR and did not follow the appropriate treatment protocol (De Jongh *et al,* 1999). Muris and Merckelbach (1997), in a controlled study of 24 subjects with spider phobia, compared EMDR, imaginal exposure, and no treatment. The researchers found that EMDR was effective in changing subjective distress and equivalent to imaginal exposure in approaching the phobic object. Two additional controlled studies with spider phobics (Muris *et al,* 1997; Muris *et al,* 1998) reported that in *vivo* exposure treatment yielded superior results to EMDR. However, EMDR was efficacious in each study and is recommended in cases when in *vivo* exposure is difficult to implement (De Jongh *et al,* 1999).

C. LIMITATIONS AND CONTROVERSY

Critics have raised three primary concerns about EMDR: the effect sizes seen with EMDR are based only on verbal report; EMDR is just the same as exposure therapy; and the eye movements are an unnecessary aspect of treatment.

Several studies have addressed the first criticism that the gains cited are based only on verbal reports by using random assignment, adequate sample size, and standardized measures to assess treatment effects (Wilson *et al,* 1995 1997; Carlson *et al,* 1998). The literature has also addressed the second argument equating EMDR with exposure therapy. Lipke (1999) noted the significant and substantial differences between the two treatments. In the case of the critics' third argument that eye movements are an unnecessary part of treatment, Lipke (1999) acknowledged that the direct evidence for the importance of eye movements is equivocal. However, he also pointed out that one of the critics' own studies with a case of medical phobia (Lohr *et al,* 1995) appears to support the use of the very eye movements they criticize: "The addition of the eye movement component appeared to have a distinct effect in reducing the level of ratings [SUDS] which then showed further reductions as the procedure progressed" (p. 149). Thus, while the critics have been vociferous (Lohr *et al,* 1998; Lohr *et al,* 1999), in some cases their own data would appear to contradict them.

Future research with EMDR needs to address the limitations presented by critics and supporters. However, it is important to recognize the significant

contributions EMDR has already made to the treatment of PTSD and traumatic memories.

D. SUMMARY

Studies have shown that millions of Americans suffer from the effects of trauma and PTSD (APA, 1994; Kessler *et al.,* 1995; Breslau *et al.,* 1998). Several well-controlled studies have shown EMDR to be effective in the treatment of PTSD and in alleviating the pain caused by traumatic memories. Although research in anxiety, phobia, depression, and other psychological disorders is promising, additional research is still needed to address the methodological issues that have occurred in previous studies (Bates *et al.,* 1996).

V. EMDR TREATMENT

EMDR treatment consists of eight phases, each of which builds on the previous ones. While the length of time spent in each phase will vary depending on the needs of the client and the therapist style, each phase is considered an essential part of the treatment. The phases are:

History taking
Client preparation
Target (problem) assessment
Desensitization
Installation
Body scan
Closure
Reevaluation

To illustrate these phases, let's return to Lisa, the rape victim mentioned at the beginning of this chapter.

A. HISTORY TAKING AND CLIENT PREPARATION

After her rape seven years prior, Lisa had initially been seen at a rape crisis center but with only limited success. Hoping that her symptoms would remit over time, she had avoided therapy for the next **3** years. When her problems continued, she had entered individual supportive therapy. Though she had established a good relationship with her therapist, Lisa reported increasing

feelings of despair at the continuing problems she was having. As mentioned, she was easily startled, felt fearful around men she did not know, and was often afraid to go out at night. Having learned about EMDR, her therapist referred her for a consultation.

The first author met with Lisa for two initial sessions of 1 hour and 15 minutes each. Her referring therapist was also contacted to obtain additional background information. The information revealed that Lisa's premorbid functioning prior to the rape had been above average.

The rape occurred late at night in the parking lot near Lisa's dormitory during her senior year. As she was getting out of her car, she was grabbed from behind, struck on the head, and thrown to the ground. Her assailant threatened her repeatedly as he both vaginally and orally raped her.

After the assault, Lisa reported that everyone involved had responded supportively including the police, hospital staff, family, and friends. (Thus, she avoided the further traumatization that some victims endure when they are not well treated.) She reported an immediate increase in anxiety and fears of being alone, but was told this was a normal reaction and would fade in time. When it didn't, Lisa blamed herself.

Although they are taught as separate phases, in practice, history taking and client preparation (Phases I and II) are often conducted simultaneously. Thus, as Lisa was sharing her background information, she was being educated about PTSD, memory, and EMDR. She was told how normal her responses were and how they were definitely not a sign of weakness or pathology. Rapport was easily established and she was anxious to give EMDR a try.

B. TARGET ASSESSMENT

In EMDR, specific painful memories and issues are elicited and rated as to degree of severity in the present. Typically, the most upsetting of these are the initial targets for reprocessing. For Lisa, the rape was the most painful issue with the vaginal penetration and threats on her life being the worst part of the memory. As was discussed, EMDR posits the need to access information in a number of different dimensions if healing is to take place. To access this information as completely as possible, specific questions, known as the procedural steps, are asked in sequence in order to evoke the stored information as vividly as possible. The goal is to evoke an upsetting picture (or sounds or smells), the clients' negative view of themselves or the world around them (negative cognition), a fairer or more adaptive way of judging themselves or the situation (the positive cognition), and an evaluation of how true the positive cognition feels to clients in the present on a scale of from 1

(feels completely false) to 7 (feels totally true) in the present (the Validity of Cognition scale or VoC). It is also important to know what feelings (emotions) are being evoked, where they are felt in the body (body sensations), and a measurement of how upsetting the incident is to the client in the present on a scale from 0 (no disturbance or neutral) to 10 (the most upsetting the client can imagine feeling). This Subjective Unit of Disturbance Scale (SUDS) is borrowed directly from Joseph Wolpe's work on systematic desensitization and is a way of taking the client's emotional temperature before, during, and after treatment. The following target assessment was taken during the third session with Lisa.

C. LISA'S TARGET ASSESSMENT

Therapist: Lisa, where would you like to start today?
Lisa: A part of me doesn't want to, but I know that I need to work on the rape.
T : Okay, when you think of the rape, what picture represents the worst part of the scene to you now?
L: I see him on top of me, raping me and telling me that if I make a sound he is going to kill me.
T : As you see the rapist on top of you, threatening you, what words go best with that picture that express your negative belief about yourself, now? (Negative cognition)
L : I'm helpless.
T : And as you imagine that scene, what would you like to be able to believe about yourself, now? (Positive cognition)
L: I'm safe enough, now.
T : As you bring up that scene of the man raping and threatening you, how true do the words, "I'm safe enough, now" feel to you on a scale from one, feels totally false, to seven, feels totally *true, feel* to you now?
L : About a three. (VoC)
T : And when you bring up that picture and those negative thoughts, "I am helpless," what emotions come up for you now?
L : I feel afraid.
T : And on scale of zero to ten, where zero is no disturbance or neutral and ten is the most upset you could imagine feeling, how upsetting does this feel to you now?
L: A six or seven.
T : And where do you feel the disturbance in your body?

L: Well, my heart is pounding, I feel a tightening across my chest, and my legs feel kind of numb.

At this point, we have elicited information about the rape in a variety of ways. We know that even though the rape happened more than seven years ago, the memory of that event is still evoking negative thoughts (I'm helpless) and painful emotions (fear), and has a definite physiological resonance in Lisa's body. With the material elicited, we begin the desensitization phase.

D. DESENSITIZATION

The client is asked to bring up the disturbing picture and negative thoughts and to become aware of any feelings and body sensations that are evoked. The therapist then proceeds to provide some form of alternating stimulation: back and forth eye movements, hand taps, or auditory tones. Lisa had chosen to do eye movements.

Therapist: Lisa, bring up that picture of being raped; those negative thoughts of "I am helpless." Notice where you are feeling it in your body and follow my fingers.

At this point the therapist begins the alternating stimulation typically lasting anywhere from 20 seconds to 1 minute. The therapist stops the stimulation, and the client is asked what he or she now notices-thoughts, feelings, body sensations, or new images. This new material then becomes the focus of the next set of eye movements and the process is resumed. This process is repeated many times and usually produces change along a number of dimensions.

In Lisa's case, the material moved rapidly through a series of exchanges in which she noticed a reduction in both the vividness of the images and the intensity of body sensations.

Therapist: (After several sets of eye movements): Lisa, what comes up for you now?

Lisa: It seems further away. The picture doesn't seem as vivid. It doesn't hurt like it did.

Therapist: Start with that. (More eye movements)

The therapist continues to do eye movements as time allows until the client reports a significant diminution of pain and disturbance, **(i.e.,** the SUDS is at a **0** or 1). In Lisa's case, this took one double session of 90 minutes. At this point, she was ready to move on to the next phase of treatment: installation of the positive cognition.

E. INSTALLATION

In addition to decreasing the pain from past events, a second goal of EMDR is to enable clients to judge themselves and the world less harshly. It is with this goal in mind that the client and clinician develop an appropriate positive cognition. Thus, Lisa was invited to look at her positive cognition—"I'm safe enough now"—and evaluate its felt validity on a level from 1 (feels totally false) to 7 (feels totally true). The goal is to get the VoC to a 6 or 7 level on this 7-point scale.

Recall that Lisa's initial VoC was a **3.** By the end of this same double session, it was a 6. At this point, Lisa was asked to do a body scan.

F. BODY SCAN

When clients report that the original disturbing memory or issue has been desensitized and that the positive cognition feels true, they are asked to bring up the original painful material and pair it with the positive cognition they have developed. They are then asked to scan their bodies checking for any residual tension. If any tension is reported, the eye movements are reinitiated to allow more material to be processed. When asked to do this, Lisa reported she felt surprisingly comfortable and relaxed.

G. CLOSURE

At the end of the session, clients are debriefed, prepared for the fact that material may continue to emerge between sessions, and plans are made for the following meeting. Both clients and therapists must be prepared for the fact that many clients will not have completed processing the disturbing material during any one session and upsetting emotions may continue to be present. For this reason, time is allowed at the end of each session for clients to discuss their fears and concerns, to receive reassurance and support from the therapist, and to do some form of relaxation before they leave.

H. REEVALUATION

At the beginning of the next session, the therapist measures the results of the previous session's processing. The SUDS, VoC, and body scan are all performed with the original material. In addition, an evaluation is made as to

whether any gains made in previous sessions are generalizing to the natural environment.

In Lisa's case, the gains were dramatic. Within two sessions of active EMDR processing, she reported that the memory of the rape no longer caused her the intense anxiety that it had. She was also extremely pleased to report that the previous week, for the first time in years, she had driven alone to a friend's house one evening without experiencing anxiety.

Simply stated, EMDR treatment enabled Lisa to experience at a feeling level what she had long known intellectually. For years, she had known that she was safe, but hadn't felt it. After six sessions of treatment, Lisa reported a dramatic decrease in anxiety, both in relation to the memories of the rape and in her daily functioning.

Lisa was an exceptionally responsive client. By no means are all clients able to move through such troubling material so quickly. This is particularly true for clients who have chronic psychological problems or a history of abuse. In such cases, EMDR will take much longer and challenge all of a therapist's skills.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE AND FIND A QUALIFIED PROVIDER

A. TRAINING AND CERTIFICATION

Most of the training in EMDR in the United States is provided by the EMDR Institute, Inc., located in Pacific Grove, CA. The Institute's program provides a minimum of 34 hours of training to licensed mental health professionals. In addition, other EMDR clinicians have been certified as trainers by the EMDR International Association (EMDRIA) and provide training using various formats. Training is open to any licensed mental health professional or student in a mental health graduate program. To become certified as an EMDR practitioner by EMDRIA, clinicians have to complete the basic training as well as a minimum of 20 hours of supervised individual and group sessions.

B. How TO RECOGNIZE AND FIND A QUALIFIED PROVIDER

To find an EMDR-trained clinician in your area, contract EMDRIA in Austin, TX or the EMDR Institute, Inc., in Pacific Grove, CA (see Resources). While those clinicians certified by the EMDR International Association have

both met the basic training requirements and received advanced training, one should use the same criteria for the selection of an EMDR therapist as you would any other therapist - recommendations from trusted friends and family, other health professionals, and professional organizations.

C. PRACTICAL ISSUES OF EMDR TREATMENT

Typical EMDR sessions run from 45-90 minutes and cost is consistent with other psychotherapies. Reported results, especially in the popular media, have sometimes touted EMDR as a miracle one-session cure. Change often does occur very rapidly during EMDR treatment. However, like all therapies, the length of treatment will depend on the type of problem, life circumstance, and amount of previous injury particular to the individual. History taking, client preparation, and clinical assessment are important components of any good psychotherapy, especially one as powerful as EMDR. Thus, a good EMDR practitioner will take the time to get a good history, develop a relationship with the client, and decide whether EMDR is an appropriate form of treatment before reprocessing painful memories or issues. In our experience, while a specific problem may well be resolved in 4-10 sessions, overall treatment can last anywhere from a few sessions to a few years.

VII. RESOURCES

The following is a list of suggested readings, videos, and websites for individuals interested in learning more about EMDR.

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Johnson, K. (1998). *Trauma in the lives of children.* Includes a chapter on EMDR. Alameda, CA: Hunter House.

Lipke, H. (2000). *EMDR and psychotherapy integration.* Theoretical and clinical suggestions with a focus on traumatic stress. A very good overview of both theory and implementation. Boca Raton, FL: CRC Press.

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Parnell, L. (1997). *Transforming trauma: EMDR.* New York: Norton Professional Books.

Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basicprinciples, protocols andprocedures* (2nd ed.). New York: Guilford Press. The primary EMDR textbook essential for mental health professionals and university courses.

Shapiro, F.,& Forrest, M. S. (1997). *EMDR: The breakthrough therapy for overcoming anxiety, stress, and trauma.* New York: Basic Books.

Tinker, R. H., & Wilson, S. (1999). *Through the eyes of a child: EMDR with children.* New York: Norton Professional Books.

B. VIDEOS

"EMDR for Trauma: Eye Movement Desensitization and Reprocessing." The American Psychological Association Psychotherapy Videotape Series II presents distinguished psychotherapists of different theoretical orientations demonstrating specific treatments for specific problems and populations.

"EMDR: A Closer Look."
This video examines how EMDR compares to other therapies for psychological trauma, the role of the eye movements, and what the research indicates about EMDR's efficacy.

. WEB SITES

EMDR Institute, Inc.— http://www.emdr.com

EMDR International Association-http://www.emdria.org

EMDR and Meditation - http://www.emdrandmeditation.com

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Chapter **16**

The Hakomi Method and Body-Centered Psychotherapies

Maureen Fallon-Cyr, LCSW
Mark Fallon-Cyr, M D

I. BACKGROUND

The field of modern-day body-centered psychotherapy (BCP) evolved out of Wilhelm Reich's queries into the relationship between the body and its

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energy. Over the years, many people have expanded Reich's ideas and furthered the field with their own observations and experiences. The evolution of body-centered psychotherapy has been diverse in both its format and depth of expertise: There are many schools and interesting programs, but there is no standardized definition of this type of therapy nor regulating body that oversees control or administration of body-centered psychotherapies. Consequently, body-centered psychotherapies are often isolated entities.

In recent years there have been increasing attempts to provide forums for communication and idea exchange, such as conferences. Additionally, an association has been created with the support of the European and United States associations of body-psychotherapy to develop *The International Journal of Body-Psychotherapy* (Heller, 2001).

This chapter will explore the origins and philosophy of body-centered psychotherapy, then extend the exploration specifically into the Hakomi method, a particularly successful modality. The end of the chapter will reference other significant body-centered therapies with additional information for accessing therapists and trainings.

II. **MODALITY OVERVIEW**

A. INTRODUCTION

Although there is no standardized definition of body-centered psychotherapy, essentially the term refers to clinical psychotherapeutic work that uses the body as a resource in the therapeutic process. Specifically, ".. . the body (is put) into action as a means of accessing repressed and fragmented parts of the self" (Caldwell, 1996). The manifestations and communications of the body are mostly unconscious and make themselves known through postures, repetitive sensations, gestures and movements, aches or pains, facial expressions, etc. Since all experience is processed through the body, repetitive experiences become habitual and begin, in turn, to shape us over time. Eventually these habitual patterns are used to manage feelings, psychological issues, trauma, etc.

Since the body is intimately connected with the mind, spirit, and emotions of a person, it serves as a therapeutic vehicle to work with and resolve relevant issues. There are numerous examples that illustrate this connection, such as psychosomatic illnesses, somatic aspects or symptoms of many experiences (i.e., trauma), physical placebo responses to medications, and findings in the field of psychoneuroimmunology, etc. Within BCP it is assumed that "deeply held beliefs, guiding images and significant early

memories [influence] . . . behavior, body structure, and all levels of physiology, from cellular metabolism and the strength of the immune system, to blood flow and the distribution of heat and muscle tone in the body, to the expression of these beliefs in posture, movement, gesture and facial expression" (Kurtz, 1990). While traditional psychodynamic therapy does not deny that this may be true, it does not use the body as a vehicle with the exception of reading simple body language.

B. HISTORY

The basis for most if not all body-centered psychotherapy originates with the work of Wilhelm Reich (1897-1957), an Austrian psychoanalyst and biophysicist who postulated that blocks against the breakthrough of emotion and organ sensations could be held as energy in the muscles of the body. He also thought that an individual would develop "character armor;" a sum of typical character attitudes, which would aid in blocking the breakthroughs, resulting in rigidity of the body and emotional deadness (Reich, 1986). Releasing this energy from the body forms the basis for many of the body-centered psychotherapies.

Other contributions to the development of body-centered psychotherapy came from the advancements of Carl Rogers, PhD, and his Client-Centered Psychotherapy approach. In his work he advocated that the client has the capacity for self-understanding and self-healing. He further believed that with the empathic caring of the therapist (as opposed to a hierarchical posture of knowing what the client needs), the client would experience more safety and this in turn would allow the client to reveal his or her deeper self.

A colleague of Roger's from the University of Chicago, Eugene Gendlin, focused on the study of what actually transpires when the therapist is being empathic and the client is relaxing into a more available therapeutic stance. In other words, what was contributing to the deepening of the therapeutic experience and the ensuing positive outcome? He began to look away from the context of what was being said between therapist and client to the manner of process; how the client was relating to the experience. From his work he developed the Experiencing Level Variable. When he began using this and other scales he found that clients who were able to speak from their inner experience were more likely to have positive outcomes in therapy. From this a process to teach people to increase their ability to access inner awareness evolved. This work is now the basis of Focusing, one of the body-centered psychotherapies in existence today (Hendricks, 2000).

C. PHILOSOPHY

The primary philosophy that binds body-centered psychotherapies lies in the premise that the client is a whole person or organism and therefore much of what is helpful to psychotherapy can be accessed in other areas beyond the conscious mind. It is accepted that the body holds emotional information and that this information can be accessed and processed through the body. However, among the differing therapies there is variation in how to proceed in accessing this information (i.e., using verbal and nonverbal cues vs. working only with body and tensions).

The premise follows that trauma or negative events create "blocks" in our experience of our "full self" by binding energy in our bodies. We then organize toward managing the block as a way to avoid emotional pain. If there are too many of these blocks, personality or physical shifts ensue that become problematic. Once the client is led through a release of the negative emotional energy he or she has an opportunity to organically adjust his or her energy, body, and beliefs (since all areas influence the other) to more authentically reflect natural expression. With the release of many stored negative emotions and the resulting tensions the client will move into increased flexibility, satisfaction, joy and in some cases may even have profound personality or character changes.

While a review of the major body-centered psychotherapies would be rich and informative, space limits our efforts. Therefore, we will limit our focus to the Hakomi method with some references to other modalities.

D. HAKOMI BODY-CENTERED PSYCHOTHERAPY

Developed by Ron Kurtz in the 1970s, Hakorni utilizes a body-centered approach, but synthesizes many other ideas and principles. In his book, *Body-Centered Psychotherapy: The Hakomi Method,* Kurtz stated that he has been influenced by a variety of body-centered psychotherapies including Reichian, bioenergetics, gestalt, focusing, neurolinguistic programming, and Ericksonian hypnosis (Kurtz, 1990). Hakomi combines these influences with additional contribution from systems theory and some ideas from Buddhism and Taoism. With the support of his Hakomi colleagues, Kurtz founded the Hakomi Institute in the 1980s.

Additionally, the 1990s brought the development of Hakorni Integrative Somatics (HIS). This work, pioneered by Pat Ogden, MA, and Kekuni Minton, PhD, brought the format of Hakomi together with the trauma work of Peter

Levine (see Somatic Experience, below) and others. Together, Ogden and Minton created sensorimotor sequencing, a method for treating trauma (Ogden & Minton, 1999). Support and interest for HIS have grown steadily with recognition from many trauma experts, including Bessel Van der Kolk, MD.

The foundation of Hakomi therapy lies within the *Principles.* These guidelines for practice characterize much of what has evolved within the body-centered modalities and actually deepen the therapist's skill in attending to clients. They are embodied in the attitude of the therapist and manifest in all facets of interaction and relationship. The principles are also thought to be the determining catalyst in healing (Kurtz, 1988).

Unity is the principle stating that we are all interconnected within the universe. This is an expansion from the idea of unity of the organism. With unity, the therapist can trust his or her intuitive map of what constitutes all people's experience and use this information to inform his or her work. Unity also lends itself to eroding the hierarchy of psychodynamic therapies: "I am just another traveler on this journey accessing myself to understand you."

Body/mind/spirit holism suggests that the mind, body, and spirit are intricately related and influence each other. As stated earlier, events of the past (memories, fears, etc.) can influence body patterning, and congruently, patterns held in the body reinforce beliefs and can negatively influence self-expression.

Organicity holds that we are "self-organizing" toward healing and growth. What contributes to our breakdowns in healing is the limiting beliefs that block us from our full authentic selves. When these blocks are attended to, the client "organically[7]' evolves toward a fuller, healthier expression of him or herself.

Mindfulness is a state of consciousness where the client's awareness is directed inward toward his or her present experience. The awareness can be directed to any number of "channels": somatic sensation, thoughts, memories, impulses, etc. When we focus mindfully on experience, we can study and deepen our understanding of our inner relationships (mind, body, spirit). This serves as an alternative to reacting habitually to our limiting beliefs.

Nonviolence is a compassionate stance that honors the boundaries and limits necessary for the safety of the client. The therapeutic process unfolds without force and with the cooperation of the unconscious (Kurtz, 1990).

Loving kindness is not a formal principle of Hakomi, but it has been the recent focus of Ron Kurtz's work. Influenced by studies that indicate a therapist's attitude is more healing than the method they use, Kurtz is developing a model for teaching others how to access loving kindness. He is also interested in expanding this concept beyond psychotherapy. If "loving kindness" could

be brought into the lives (or workplaces) of everyday people, what would the world look like (Kurtz & Minton, 1997)?

Within the Hakomi paradigm it is thought that a person's behavior, thoughts, feelings, attitudes, and relationships are determined by unconscious core beliefs. These beliefs organize the person's experience of the world (internal and external) and are set early in life (excluding later traumas) by early relationships and experiences. Core material is representative of issues such as safety, acceptance, empowerment, and love and is informed by such life experiences such as change, growth, loss, trauma, and abandonment. While core beliefs can be affirming, Hakomi practitioners primarily work with limiting, problematic material. Core material becomes limiting when there is a missing experience associated with it: an act, verbalization, or physical discharge that was denied expression in the wounding moment. The Hakomi therapist creates a safe working environment where the missing experience can be evoked and processed, allowing the client to release negative emotions and beliefs and reorganize into a healthier self.

As we attempt to avoid the pain of the past, we unconsciously develop personality traits or strategies to manage ourselves in relationship to the world. These strategies evolve out of our core beliefs and become habitual patterns of response to real or presumed needs or stressors. As a client's therapy progresses over time and limiting core material has been realigned, strategies become less entrenched and more flexible. This gives the client greater variation in coping with present-day experience. For some clients, profound character shifts may occur (Kurtz, 1990).

E. OUTLINE OF A BASIC HAKOMI PROCESS

As the session begins, a relationship is established between the therapist and client. Attention is directed toward establishing safety and trust. The therapist (in mindfulness) tracks the client's verbal cues, emotional tone, facial expressions, gestures, body movements, etc. During this time, the therapist makes verbal comments on the process to let the client know that he or she is understood. When the time is appropriate, the client is directed to "go inside" and establish mindfulness.

In this state of mindfulness, the therapist and client begin to study or "get curious" about the client's experience and how it is organized. This "studying" is accomplished by conducting experiments - small experiential opportunities where the client is given a piece of information (verbal, physical, etc.) and then observes his or her reaction. During these experiments, the therapist and client mindfully study what is evoked and the client's under-

standing and access to core material deepen. As the client approaches core material, strong feelings or memories can be evoked that have been repressed. With the support of the therapist, the client is allowed to release these feelings. Once these emotions have been released, the client often settles into a vulnerable, softened stance.

At this level of the work, the Hakomi practitioner is often blessed with a moment of working with the inner child: the "younger self" who sustained the wound and created a core belief in an attempt to make sense of the negative experience. It is often a very touching moment in the therapy, coming face-to-face with the original author of the core material, a small child. Often the client will magically transform into their younger self: Their voice will often sound younger and the client assumes a childlike posture and behavior. In working with the child, the therapist embodies the role of a compassionate adult who, in the face of the wound, provides permission or information that frees the child to act in his or her best interests. With the "missing experience" carried through, the client is then guided to integrate the new experience. Through this process, the client evolves toward a healthier, fuller expression of him or herself.

F. CASE EXAMPLE

Jon was initially presented with mild depression and fear of conflict. He described how his conflict issues were negatively impacting his relationship with his girlfriend. As he related his story, the therapist noticed that he embodied a deflated posture and spoke in a quiet, hesitant voice.

Jon was invited to "go inside" and notice what was present in his body as he spoke. He quickly became aware of a slight pain and tightening in his stomach. Jon was instructed to focus his attention on the pain and tightening. Immediately his breath became constricted and his posture hunched as he bent around his belly. The therapist offered support and reassurance and then noticed a slight release in Jon's breath.

At this point the therapist asked Jon if they could explore this a little more and he agreed. The therapist redirected Jon to the sensations in his stomach. When Jon was mindfully connected to the sensations the therapist asked, "So, if the tightening could speak, what would it say?' What popped into Jon's mind was, "Leave me alone!"

The therapist deepened Jon's experience by offering to take over the little voice. As the therapist replicated the directive, Jon suddenly began crying. In between sobs he related a memory of his alcoholic father yelling at the family when Jon was a young boy and his wish that his father would "just go away."

He also related a myth his family lived under: that family members "caused" the father's drinking by upsetting him. The therapist offered quiet reassurance and attended to safety in the moment, particularly making sure that Jon remained the mindful observer of the memory, rather than getting lost in it or retraumatized by it.

As Jon ended his crying, the therapist noticed that he had entered the child state. He repeated over and over, "Why was he so mean?" In quiet, understanding tones, the therapist began to discuss with Jon the nature of alcohol and specifically clarified that Jon was not responsible for his father's drinking or the ensuing fights that he witnessed. In a childlike manner, Jon was able to ask the therapist questions that he was not allowed to ask when he was a child, such as "If he loved us, why did he keep drinking?" This exchange continued until Jon had all his questions answered and he could rest in this new information. At this point the therapist asked Jon to "check in" with his stomach. Jon reported that he felt relaxed but tired.

The therapist then explored with Jon the connection between his present avoidance of conflict and his fears of being overwhelmed by others' anger and accusations. At this point, Jon had an "Aha!" moment: suddenly the connection was clear and with the "new information" Jon was able to integrate these concepts. His posture visibly straightened, his face softened, and Jon laughed: If others were angry, it was not necessarily his fault!

Over the course of therapy Jon was able to rework his ideas about conflict and relationship and was able to embrace his relationships in a deeper, more authentic manner.

III. RELEVANCE FOR MENTAL HEALTH

Hakomi (and other BCPs) are very important to the field of mental health. They incorporate the whole self (mental, physical, and spiritual) into a system of healing that traditional psychotherapy often overlooks. In the case of Hakomi Integrative Somatics (HIS), the field of trauma psychotherapy is yielding successes never before seen. Experiential psychotherapies more quickly access deeper levels of unconscious material than traditional therapy. This, in turn, can facilitate more significant changes in core beliefs and attitudes.

While Hakomi does work with character strategies, it does not delineate treatment protocols for traditional DSM-IV diagnosis. However, practitioners with traditional therapeutic training can successfully integrate the Hakomi method into their work with more severely mentally ill clients.

IV. SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

Hakomi is a very powerful method of psychotherapy. Consequently, it can be harmful (psychologically or emotionally) if misapplied. This work has developed within the human potential movement, which does not emphasize traditional psychotherapeutic diagnosis or specific mental disorders. Most trainings of body-centered psychotherapists focus almost exclusively on their specific modality. They do not provide a comprehensive study of mental disorders or mental illness; therefore most practitioners have a somewhat limited understanding of these areas. There is a potential for harm when a client has a significant mental disorder that is not recognized by the practitioner. For example, in someone who has schizophrenia, doing deep work and evoking powerful experiences may have a destabilizing or disintegrative influence. Additionally, a client who is significantly depressed may not be able to effectively relate his or her needs to the inexperienced practitioner and could be at increased risk around issues such as suicide.

While the principles and guidelines of many BCPs provide a large measure of safety, other variables potentially increase the risk to clients. Traditionally, BCPs consider a wider audience for admission to their trainings and often the criteria for admission are less strict than traditional graduate programs. There is also less supervision of a student's work than is traditionally warranted under formal psychotherapeutic programs. Consequently, there are many more graduates of these programs who do not demonstrate professional comprehension of the practice. While they may never acquire the certification of their program, they are often free to practice and market the modality to uninformed clients.

An important area of potential harm to clients lies in the use of touch during psychotherapy. Traditional psychotherapeutic practices do not involve touching the client, while Hakomi and other BCPs recognize the importance of touch. In traditional therapy, this boundary arises out of the belief that touch is not necessary (since the body is not utilized significantly in treatment), and potentially a therapist can seriously violate a client's boundaries. The reservations around touch are understandable since its use is very complex. However, if touch is applied appropriately, it can be extremely useful in healing (Caldwell, 1997). Hakomi devotes significant attention to training in the appropriate application of touch. Since this topic can be unsettling to the uninitiated, other conventional caregivers involved with a client may need to be informed and educated if they are not familiar with BCPs. As always, open communication between multiple caregivers supports the best interest of the client.

In the use of medication, there is no inherent conflict between the use of psychoactive medications and Hakomi or other BCPs. They are essentially different tools that can be potentially applied in a complementary fashion. However, a number of alternative providers have a bias against their use, while a number of conventional caregivers have a bias against alternative care. Responsible application of any treatment modality is necessary and these biases can be addressed in a thoughtful manner.

V. RESEARCH

In the study of psychiatry there is no single comprehensive model that fully explains mental and emotional functioning and overall mental health. Some models are descriptive with little reference to causality (i.e., psychiatric DSM-IV), while others are focused on problem solving (cognitive/behavioral therapy). The development of a comprehensive model for understanding the human condition is very much in its infancy.

The scientific assessment of psychotherapy has been a "soft" science for some time: it can be difficult to know exactly what to assess and how to assess it. A large number of variables are involved, and they are difficult to isolate for study. Consequently, it has been difficult for even traditional psychotherapies to pursue solid scientific research. This dilemma is magnified within the field of body-centered psychotherapy, where there is no single definition of the therapy under which the method can be studied. Additionally, the organizations supporting body-centered psychotherapies tend to be less equipped (both organizationally or financially) to conduct such research.

There have been recent attempts within the field to become more standardized. The European Association of Body-Psychotherapies has engaged in a formalized assessment paradigm intended to address professional competency for acceptance into the European Association of Psychotherapy (Young, 2000). Also, an ongoing study is being conducted in Germany on the efficacy of body-centered psychotherapy; the results of this are pending.

While there may not be empirical research specifically supporting body-centered psychotherapies, there is a great deal of research from the fields of trauma, psychosomatic medicine, psychoneuroirnrnunology, and developmental studies demonstrating intimate interplay between the body, mind, and emotions (Benson, 1996). Additionally, body-centered psychotherapies rely heavily on their accumulation of clinical experience. Journals and clinical articles of the differing organizations suggest evidence that many of these modalities are effective therapies.

Generally, there is a recognized need for further research in the field, even if the method is not always agreed upon. In applying the standardized rating

scale used throughout this book, Hakomi and most of the body-centered psychotherapies rate at a 3 -promising prospective data lacking some important control or controlled trials with trends suggesting further exploration.

VI. TREATMENT APPROACHES

As mentioned above, Hakomi and other BCPs have mainly been applied toward growth and human potential, not in treating specific disorders. There are some exceptions to this, but the application of these modalities to specific disorders requires further study. Traditionally, BCPs do not utilize traditional psychiatric DSM-IV diagnosis and may, in fact, view its use as pathologizing the client rather than supporting the client's growth.

As mentioned, the principles of Hakomi (unity, mind/body/spirit holism, organicity, mindfulness, and nonviolence) can be applied in any therapeutic interaction (Faucheaux & Weiss, 1999). That is, they are as relevant in committing a psychotic individual to a hospital, as they are in helping an individual realize the fullest expression of his or her true self.

Applications to common disorders such as depression, anxiety, and attention deficit hyperactivity disorder (ADHD) are potentially very useful. These disorders are multidetermined (that is, influenced by genetics, environment, familial influences, trauma, substance abuse, health, spiritual needs, etc.). Therefore a multimodality approach to treatment is indicated. Limiting core beliefs and unresolved experiences in the body can be the outcome of, or can influence the development and maintenance of, some of the common mental and emotional disorders. Therefore, Hakomi and other BCPs can be very useful in treatment. A good example is offered in the trauma work of HIS (Ogden, 1997). Again, there is limited research on the efficacy of these therapies and more study is needed.

Some clinical examples of how Hakomi has been used with more traditional diagnoses follow.

A. DEPRESSION

Sue was a 37-year-old woman who presented with complaints of depression and two failed marriages. She initially stated that she felt that she had "messed up" most relationships in her life, including her bond with her young teenaged daughters.

As Sue told her story the therapist noticed that she embodied a palpable "heaviness": relating her story was proving effortful. At one point the therapist

asked Sue to take a moment to notice how her body felt. Sue reported that she felt "tired." The therapist then asked her to identify where the "feeling of tired was most prominent. Sue stated that she felt tired in her face and in her chest.

At this point, the therapist suggested that Sue remain focused on the sensation and quietly notice if anything else was present. After some time, Sue reported a tightness growing in her chest. She was encouraged to shift her focus to the tightening. Sue then reported that she sensed the tightening growing into her throat and she was beginning to feel uncomfortable. She suddenly pulled out of mindfulness into regular consciousness and looked at the therapist.

The therapist gently explored with her what had happened. Sue initially stated that she thought this was "silly" and wondered aloud if following this track was really important. The therapist explored with Sue her conflict and her belief about the importance of Sue's feelings, even if they were "silly."

Sue was able to reenter mindfulness and quickly established contact with the tightening in her chest and throat. As she "felt her way" around the tension, she suddenly became aware that she felt angry. The therapist reassured her and encouraged her to "stay with" her anger, sensing Sue's discomfort with the new feeling. After a few moments, Sue began crying. Between sobs Sue softly cried, "I hate her. I hate her," and she began rocking back and forth as she covered her face. The therapist assumed a supportive position, mirroring what Sue was saying and gently reassuring her.

When the tears had subsided, Sue reported that she had a memory of her mother telling her that she was "worthless" and would "never amount to anything." She related how she wanted to yell back at her mother, to tell her that she was wrong, but feared physical harm if she confronted her mother.

With this information, Sue was able to connect her relationship issues and her depression to beliefs that were set when she was a small child. Denied her rage, Sue had adopted a deflated stance similar to "what's the use" when she felt that she could not be honest with others about her feelings. Consequently, she withdrew in the relationship as a way of protecting herself. Over time, Sue's therapy focused on this belief and she and the therapist explored various ways of nourishing her core self and redefining her "worth." Within a few months the depression had subsided and Sue was excited to pursue her relationships (including the one with her daughters) with her "whole self."

B. ADDICTION

David was a 26-year-old man who presented with a gambling addiction. He reported that he was addicted to buying lottery tickets and felt that it was beginning to "take over" his life. Each day the cycle was the same: He would buy the tickets

and then spend the day wondering if this would be pay-off day. Each evening would bring letdown or a slight win that would urge him on to the next day.

As David spoke about his predicament, his excitement and disappointment were palpable. During his story, he was guided into mindfully observing himself. He stated that he had two distinct feelings: On the left side of his body, particularly in his arm, he felt "racy, happy, and excited," while on the right side, he felt "constricted, almost like anger." He then popped out of mindfulness and related jokingly how it reminded him of the angel-devil scenario on his shoulders.

The therapist smiled and supported his revelation and then asked if he were willing to explore this relationship a little more. David stated that he was willing and was gently guided back inside. When he could feel both energies again he was asked, "Which one are you more interested in looking at in this moment?" He stated that he was more curious about the excited side of his body. His attention was then directed to the left side of his body and the therapist focused on deepening his awareness of the sensations.

David immediately reported that he felt happy and excited and the words, "Oooh-eee, now I'm gonna get it!" came to mind. With his eyes closed, his face was visibly happy with a large smile. He was encouraged to stay with the feeling and notice if there were any other sensations or information. He stated that he saw himself standing at the lottery office collecting a large check. At this point, the therapist asked him to focus on the feelings he associated with this moment. David reported that he felt like a kid in a candy shop. He used words such as, "happy," "full," "smart," and "popular." He also stated that now he could be anybody he wanted.

The therapist supported his good feelings and allowed David to bask in the nourishment of the moment. When he seemed satisfied, she asked if they might explore this a little more. David happily agreed, stating he wished this moment was real. The therapist then asked if there was anywhere else in David's life where he felt this way. David visibly saddened and stated that there was no other place in his life where he replicated this feeling. The therapist then asked if she could give him back some words that he had shared moments earlier. David nodded (still with his eyes closed) and the therapist asked him to mindfully notice what "came up" when she spoke the words: "You can be anybody you want."

David scrunched up his face and dropped his head. He reported that he heard the words, "No I can't. I'm just a nobody!" The therapist invited David to stay with the new sensation. After a few moments, David reported that he had an image of his stepfather, who was a lawyer, telling him, "Nobody's ever made anything of themselves with those grades. You better get them up if you plan to do anything with your life." David then related that he had great difficulty in school and never got his stepfather's approval.

The therapist explored with David the connection between his limiting belief ("I'm just a nobody") and his attempts to fix it with his dreams and associations to winning the lottery. She supported the attempt to move toward a healthier, happier life, while also working with David to nourish his own worth and the belief that he can be "anyone he wants."

C. TRAUMA

As noted, HIS has successfully combined Hakomi therapy and somatic therapy to work with patients who have experienced trauma. To summarize the view of Ogden and Minton: the various experiences that we encounter in life are normally processed to varying degrees on three levels: cognitive, emotional, and physical or sensorimotor (to this we would add the spiritual dimension). The manner and degree of processing required depend on the nature and intensity of the experience that has occurred. In traumatic situations, the experience can be so overwhelming that a person is unable to process the event(s) leading to a variety of significant persistent symptoms. These symptoms can include dissociations, pain, tensions, substance abuse, depression, anxiety, etc. In recovering from trauma a client must process the "unmetabolized reactions" to the traumatic events on all three levels: cognitive, emotional, and sensorimotor. (In comparison, many therapies work with trauma on the cognitive and emotional levels but ignore the sensorimotor level.)

It is believed that unprocessed sensorimotor reactions such as hyperarousal or numbing can be triggered at any time and can easily overwhelm trauma clients. If this "hijacking" occurs, it can prevent processing on any level or even become retraumatizing. Therefore, it is first necessary to process on the sensorimotor level so that work on the cognitive-emotional levels will not be compromised. To this end, HIS has developed a therapeutic method called "sensorimotor sequencing," where the therapist helps the clients learn to regulate their level of arousal and process the trauma through their body by activating "innate sensorimotor sequences" (i.e., automatic movements, changes in breath, muscle tension and release, etc.). This process can result in a sense of resolution or completion in the body and allow therapy to address the other levels of trauma (i.e., cognitive, emotional, and spiritual) (Ogden & Minton, 1999).

D. CLINICAL CASE

Bob was a 42-year-old man entering therapy for the first time. In relaying his history, Bob reported that his father regularly beat him, often quite

severely, for minor infractions. During one session, Bob was talking about a particular beating when he was 7 years old. Suddenly, Bob became aware of heaviness in his chest. As Bob gave it his attention, the sensation intensified. The therapist invited Bob to follow whatever movement wanted to happen in his body. Immediately, Bob stood up from the couch in a defiant stance with hands on hips. The therapist asked him to stay with this posture and "feel" it. Upon doing this, Bob deflated and said that it was what he had wished he had done. Directed to listen to his body, Bob then dropped to the couch and cowered, pulling his legs up and covering his face with his arms in a protective fashion.

The therapist directed Bob to stay focused only on somatic (bodily) sensations and movements and to follow "what wants to happen." On its own, Bob's body repetitively tensed and released; at times this was concurrent with his breath accelerating and then slowing. This cycle repeated for a few minutes, and then as it abated Bob began crying. In a childlike voice he began asking why his father hit him. The therapist assumed the nourishing adult role and answered his questions, reworlung the core material. Following this intervention, the therapist was able to note that Bob's body was visibly more relaxed, his breath was deeper, and his facial expressions appeared markedly different (more open and softer).

E. SUMMARY

Body-centered psychotherapy is a diverse and powerful force in therapy that is enjoying many successes in resolving negative emotions and trauma. It can also be practiced in a very complementary fashion with traditional health care treatment provided there is good communication between practitioners. In fact, much can be done in the area of illness given BCP's reliance on the mind/body holism paradigm.

Specifically, the Hakomi method and Hakomi Integrative Somatics have contributed a great deal to the field of body-centered psychotherapy. Ron Kurtz's synthesis of the best of body-centered psychotherapy and his clear format make Hakomi a formidable method of treatment. Hakomi has been successfully used in areas of personal growth and has augmented treatment of more serious mental illnesses.

In many ways, however, body-centered psychotherapies are still struggling for recognition and acceptance by larger psychotherapeutic and medical institutions that presently dominate the field. To this end, there is much work to be done in the areas of standardization and research. Additionally, the field would be helped by offering clear formats for the

treatment of current, identifiable diagnoses, such as depression. Body-centered psychotherapies do not necessarily need to adopt the current manner of labeling and diagnosing (often viewed as pathologizing by many BCPs). However, they must demonstrate in qualitative, scientific method that these therapies are successful. Only then can body-centered psychotherapies influence the traditional institutions toward a more holistic approach to healing.

VII. TRIAGE: TRAINING CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

The Hakomi Institute offers training throughout the world with the majority of training programs taking place in the United States. The traditional Hakomi training is 20 months long (meeting one long weekend per month). Other training includes a 6-month professional skills training for established therapists and postgraduate training aimed at graduated Hakomi students who wish to acquire certification. The institute recognizes certified Hakomi therapists (CHT) as those practitioners who have demonstrated a professional level of expertise in the modality. A list of certified practitioners can be accessed through the central office of the institute or by logging onto the Hakomi Web site.

Hakomi integrative somatics offers training in two parts: The first 6-month training program (meeting one long weekend a month) focuses exclusively on understanding and working with primary trauma (i.e., car crashes, sexual abuse, etc.). The second training session (which takes an additional 6 months) focuses on developmental injury (i.e., long-term abuse by a parent).

VIII. RESOURCES

Information on Hakomi therapists, training, and workshops can be obtained through the central office.

Hakomi Institute
P.O. Box 1873
Boulder, CO 80306
(888)421-6699
www.hakomi.com

The offices of Hakomi Integrative Somatics can be contacted at

Hakomi Integrative Somatics
Crossroads Gardens
1800 30[1] Street, Suite 201
Boulder, CO 80308
(303)447-3290
www.hakomisomatics.com

The United States Association for Body Psychotherapy (USABP) is located at

USABP
7831 Woodmont Avenue, Suite 294
Bethesda, MD 20814
(202)466-1619
www.usabp.org

There are many different body-centered psychotherapies used throughout the world today. While we have focused extensively on Hakomi, a brief introduction to some of the other popular body based therapies follows.

A. FOCUSING

Developed by Eugene T. Gendlin, PhD, focusing was developed as the result of Dr. Gendlin's work with Carl Rogers, PhD, at the University of Chicago. In his research, Dr. Gendlin discovered that clients with ability to track inner experience had more positive outcomes in their therapy. He then developed focusing as a way to teach clients the skill of inner awareness.

Clients are instructed in how to increase their inner experience by being directed to witness the "felt sense" in their body of whatever they are experiencing in the present moment. During this time the therapist is also tracking for "implied next steps" or what wants/needs to happen next in the sequence of the experience. As the therapist and client encounter a block, the concentrated focusing allows for new/organic words, images, or actions to arise from the inner being and produces a "felt shift." Following many shifts, the client begins to change and embody a healthier, full self (Gendlin, 1978).

L **Availability**

There are therapist/trainers in 28 countries including the United States. Within the United States there are practitioners in 30 states with the majority situated in California, Illinois, Massachusetts, and New York.

2. Training

Focusing is open to anyone and does not require a background in psychotherapy. The training is not standardized in its content as the very nature of focusing emphasizes approaching each session open-mindedly and without bias so as to be prepared to fully co-create the session with the client. However, to be certified in focusing there is a standardized process that involves higher levels of training under the supervision of a certifying coordinator (or mentor). This certification also involves instruction in creating a public presence and becoming a focusing trainer.

3. Contact

To contact The Focusing Institute, access its Web site at www.focusing.org or call (845)362-5222.

B. SOMATIC EXPERIENCE

Well-known trauma theorist, Peter Levine, PhD, has used his observations of wild animals of prey and their responses to trauma to formulate a system of trauma energy resolution. He found that while animals of prey are threatened on a regular basis, they rarely manifest traumatic behaviors. His studies revealed that, unlike humans, these animals discharge excessive levels of energy associated with survival strategies.

Following trauma, humans often are left with a nervous system stuck in "survival mode." Symptoms of trauma begin to manifest as the body attempts to "manage" this undischarged energy. In working with somatic experience, the therapist helps the client access a somatic experience of the trauma ("felt sense") and then with gentle support, assists the client in safely discharging the excess energy (Levine, 1997).

1. Availability

Somatic experience practitioners can be found in Europe and in more than six other additional countries. Within the United States, 19 states have listings for practitioners.

2. Training

The training for somatic experience is 3 years in duration and consists of three levels of training. Each level has three segments, and each is 4 days

long. In addition to the instructional tutoring, 12 hours of personal somatic experience sessions and 12 hours of individual and group consultation are required.

3. Contact

Foundation for Human Enrichment
P.O. Box 1872
Lyons, CO 80540
Phone: (303)823-9524
Fax: (303)823-9520
E-mail: ergosl@earthlink.net

C. PESSO-BOYDEN SYSTEM PSYCHOMOTOR (PBSP)

Albert Pesso and Diane Boyden have developed a system of treating clients with unresolved issues and to address the many levels of need/functioning to fully align our body, mind, and soul into a fuller existence.

The sessions are often in group format. However, they can be done on an individual basis. In the session the client and the therapist track the meaning of verbal, nonverbal, and emotional experience. This meaning leads to a "center of truth." From this point the client is able to bring forth an old belief or scene that influences them in the present. Another group member role-plays this "voice," thereby freeing the client to experience his or her reaction to the old tape. Another member takes on the role of "witness figure," compassionately putting words and meaning to the reaction (i.e., "I see how sad you are when hearing that statement"). Oftentimes at this point in the session, a vivid recollection manifests in relation to the "voices." Other members may then be asked to play the role of the offending person. In a setting of safety, the client then gets to fully feel and integrate the previously repressed feelings associated with the negative experience. An "ideal parent" is also accessed to give the opportunity for a "corrective experience" allowing the clients to redefine themselves and their relation to the world.

1. Training

To be a practitioner in this method, three segments of training must be completed. Each segment takes approximately 6 days and costs $750 (cost as of December 2000).

2. Contact

For information go to www.pbspi@aol.com.

D. RUBENFELD SYNERGY

This technique was founded by Ilana Rubenfeld in the 1960s and integrates elements of the work of F. M. Alexander, Moshe Feldenkrais, Fritz Perls, and Milton Erickson.

The client and synergist cocreate a safe environment where feelings can emerge and be integrated with present experience. This is accomplished by using a combination of gentleness, trust, acceptance, and humor. Synergists also bring into awareness many other aspects of witnessing: kinesthetic awareness of the use of words and images, how consciousness affects movement and posture, and how movement affects thinking. Synergists also focus on the use of breath in creating movement within the client (Rubenfeld, 1997).

1. Availability

There are certified Rubenfeld synergists in 36 states.

2. Training

The training is taken over 4 years at **3** weeks per year (7 intensive days per segment). The student is also mandated to participate in three regional supervision groups per year and 20 private Rubenfeld Synergy sessions.

3. Contact

Information from the National Association of Rubenfeld Synergists can be found at www.rubenfeldsynergy.com.

E. BIOSYNTHESIS

Biosynthesis was founded by David Boadella in the 1970s. It is a complex method of therapy strongly influenced by Wilhelm Reich's work with orgonomy. It focuses on many levels of treatment: the energetic relationship between the client and therapist, the biospiritual realm, the "life fields" (seven possible areas of concentration of the work, including body, emotions, relationship) and specific attention to "polarities," tracking the individual's

needs for what is nourishing. For instance, what may be nourishing to one person may feel violating to another. Biosynthesis also uses methods to create organic emergence of feeling and experience by tracking and working with breath.

1. Availability

There are 2500 members worldwide. Some therapists may be located on the Web page www.orgone.org/therapyOO.htm.

2. Training

Training information is available in the United States by contacting

Mark Ludwig
P.O. Box 7 13
New Paltz, NY 12561
E-mail: MaLudl23@aol.com

F. BlOENERGETIC ANALYSIS

Bioenergetic analysis is also based on the work of Wilhelm Reich. Bioenergetic therapists focus much of their attention on muscular patterning in the body (i.e., posture, movement, breath, etc.). The therapist gently makes the client conscious of these patterns through exercises and then explores releasing these patterns. The client is then able to experience feelings that have previously been repressed. Over time, clients begin to understand how these defensive postures have kept them from their spontaneous, joyful self-expression.

1. Availability

There are more than 2300 practitioners worldwide. Some therapists can be located on the Web site www.orgone.org/therapyOO.htm and by typing in "Bioenergetic therapy" on the World Wide Web.

2. Training

Training is available for both medical and nonmedical clinicians. The American College of Orgonomy provides training for MD and DO candidates.

Other training opportunities can be accessed on the Web by searching under "Bioenergetic therapy."

G. PRIMAL THERAPY

Primal therapy was developed by Arthur Janov, PhD, in the 1960s along with his colleague, Michael Holden, MD, a neurologist. It focuses on releasing the repressed feelings from traumatic childhood events. When these feelings are released, tensions in the body decrease and psychosomatic symptoms resolve. The therapy is performed over an intensive 3-week session (the first week is primarily individual, the following 2 weeks are done in group format).

1. Availability

Primal therapy is available through the Primal Institute in Los Angeles, California. They can be contacted at (310)785-9456.

2. Training

Information is not available as Dr. Janov felt that the techniques practiced by a nonqualified individual could be destructive to a client. Training information is available on the Web at www.primalinstitute.com.

H. DANCE/MOVEMENT THERAPY

This therapy involves the psychotherapeutic use of movement to evoke change in emotional, physical, and relational spheres. Therapists use movement to access a fuller sense of self, release rigidity, increase awareness of the body, and enhance social abilities.

1. Availability

There are more than 1200 dance movement therapists working in 31 countries and 46 states in the United States.

2. Training

Masters-level programs are available through universities and colleges with registration conducted by American Dance Therapy Association, which can be contacted at www.adta.org.

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Chapter 17

Process Work

Max Schupbach, PhD

I. HISTORY, METHODS, AND PHILOSOPHY

A. THE BEGINNING

In the early 1970's, Arnold Mindell was working with a client who was dying of stomach cancer. Mindell had already hypothesized that dream interpretation alone is not always completely satisfying as a method for working with individuals who are afflicted with illness. Having been sick himself in prior years, the Jungian training analyst had been experimenting with following his own body experiences with awareness and with the same attitude of open curiosity for potential meaning that he applied in dream interpretation. Dreams, like body symptoms, often seem disturbing and terrifying. However, once their meaning and underlying patterns are brought forth through the process of

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amplification, elements that initially invoked fear reveal themselves to be the carriers of exhilarating and empowering stories. Mindell also suspected that working with body symptoms in the same manner would produce similar results. Once the latent stories behind the symptoms were told, the terrorizing and pain-making characteristics would lose their grasp, and the symptoms would instead become allies on the path of individuation. This would inspire a more complete expression of one's own distinct nature, transcending the socialized roles to which one had previously adhered.

The tumor in his patient's stomach was unbearably painful, described as something trying to break out. The patient amplified the pressure by pushing out his stomach and pressing on it in an effort to exaggerate the pain. He said that he felt like something was going to explode. At this point, he realized that he had never before had the ability to explode or to express himself sufficiently. During his next sessions with the therapist, he "exploded" every time they met, making noises, crying, and screaming. His condition became greatly improved. Before going to the hospital, the patient dreamed that he had an incurable disease and the prescribed medicine contained a bomb-like quality. When the therapist asked him to express this quality, he made a deeply emotional sound, wailing like a bomb dropping through the air. The patient discovered that in his experience of the cancer, his body was literally exploding with pent-up expression (Mindell, 1989a, pp. 6-8).

These events marked the beginning of the development of the dreambody concept, which has since been applied in a wide variety of situations. The "dreambody" concept can be described intuitively as well as scientifically. On an intuitive level, the dreambody is experienced through the body in a manner that cannot be measured by the descriptive parameters of allopathic medicine, as the experience has a nonlocal quality that transcends physical boundaries. It is the dreambody that allows us to fly in our night dreams and that warps our experience of time in such a way that an hour in the company of a lover feels like a short event that is over before it begins, while an hour spent sitting in a mandatory meeting seems to fill several lifetimes. From this viewpoint, the body is like a harp, which is played by the winds of dreams, blowing through within the course of the day, creating wonderful, uncanny, painful, disturbing, or tiring melodies (Mindell, 1993, p. 21f).

The dreambody can also be described through mathematical correlations, which highlight the fact that body symptoms and experiences, when amplified in a methodically accurate fashion, will mirror the pattern of the individual's night dreams, as described in the story above. How do these pattern's relate to our everyday consciousness? Are they complementary and balancing to an otherwise one-sided perception? Are they compensatory? Are they wish fulfilling?

B. THEORY AND METHODS

These questions portray the basic categorical hierarchy of our perceptions. Consensus reality is the most significant reality, under which all other experiences and realities subordinate. For example, the concept of a shadow implies that there is a real world of which we are conscious and that takes precedence over an illusionary, nonmaterial, psychological dream world. Shadows are the reflection of something material; they have no existence of their own and are merely mirages created by the particular manner in which light hits an object. If the object is gone, so is the shadow. The existence of a clinical categorization of two different states of consciousness, normal and altered, further illustrates this point. In aboriginal cosmology, the opposite is true: The dream reality is of primary significance, and the material world is merely a background shadow play of the dreamtime drama. The material world reflects the dream world. Even the chair that you are now sitting on only exists because it was first and foremost "dreamt" in the other world.' This concept is the expression of a central belief system that influences not only the way in which we view everyday consciousness and dreams, but also the way in which we organize our life experiences. While the consensus reality viewpoint marginalizes the significance of body experiences and dreams, the dream's perspective sees consensus reality from the viewpoint of aboriginal cosmology, in which the symptom of the knee and the relationship problem of the individual are merely the three-dimensional shadow effects of a hyperspatial event.

Everyday consciousness tends to create a more or less cohesive reality into which we organize the information we receive through our senses in an attempt to perpetuate the perception of a coherent, linear world that we can rely on. Those aspects of our experiences that comply with this worldview add to it value and coherence. As a result, these experiences dominate our consciousness, marginalizing all other experiences that challenge this linear worldview. For example, on a gradient scale, experiences that validate our identities are placed in the center, while those that do not support the realities that we hope to see are placed on the periphery. Just as a family system includes cousins, aunts, and uncles in the "us" category, distinguishing itself from the "them" category made up of "others," we ostracize all aspects of our experience that we do not identify with. Deciding factors for centrality are determined by culture and roles. This phenomenon is both social and political. For example, racism is apparent in a society in which white skin has more centrality. For many white people, skin color is not often noticed consciously

Qawanji Ngurrku Jawiyabba.i, aboriginal elder from the Gugu Yalanji People in Cape York, Australia, personal communication with the author, 1998.

when the color is white, but is instantly noticed when the color is black. A person of white skin color might feel that this differentiation is "normal" and will understand only with difficulty that a person of color correctly experiences this phenomenon as racist. This same process of centralization and marginalization allows the formulation of statements such as "I am well, but my knee is hurting." This disidentification implies that the knee is now an autonomous part, separate from the whole and out of control.

The knee is hurting, or in process work terms, it is dreaming (Mindell, 2000b, p. 42f)- When we reduce the description of the experience to the term "hurting," we are not saying anything specific about the experience itself, but are rather describing the fact that the experience is interfering with the conscious mind's preconceived ideas about how knees should feel and function for them to be considered normal. This situation is analogous to a personal description of a dream that only uses words such as "frightening" or "painful," without actually mentioning the chasing monsters or the teeth of the tiger that bit the dreamer in the leg as he or she was trying to get away. To find the story that is contained within the hurting knee, we need to go deeper into the experience of the symptom, searching for its exact sensory-grounded description.

I asked for such a description from a client whose knee was actually hurting. The client said that he experienced a strange locking sensation around the lower part of the knee, which, in a cramplike fashion, was blocking and constricting the knee from moving freely. As he described the feeling verbally, one hand involuntarily began to form a circle with a squeezing motion. After encouraging him to go further with this hand motion, which was representing the kinesthetic experience in his knee, he exclaimed: "Exactly, this is how it feels, like a vice!" I encouraged him further, asking him to tighten his hand and duplicate the experience of the knee tightening around the joint. I placed my wrist in his hand and tried to move it back and forth, playing out the knee joint, while he tightened his grip and blocked my movement. "What are you doing?' I asked. "Don't move," he said, "I don't want you to move." He then suddenly remembered a dream from the night before, in which he was locked in his old study room of past university years, unable to move away from the desk. He then explained to me that he had both loved and hated his student years; he loved gaining an in-depth understanding of the particular topic of focus through the process of study and concentration, but at the same time hated the exam pressure and strict academic curriculum that inhibited his freedom of movement, both physically and psychologically. At this point, he broke out in sweat and began to look really upset. He finally revealed a recent recurrent fantasy of taking a year-long sabbatical from his medical practice, in which he would research a particular topic of interest. He had always

flirted with this idea, but felt work in his clinic was too exciting to leave. He was also concerned about the reactions of his family members. However, the client finally admitted, the main inhibiting factor was his fear that he no longer had the ability to sit still at a desk for days, studying and thinking. When asked if he could speak to the free-moving knee joint as the spirit of the constrictor, he explained to the joint that there is a time in life in which freedom is important and a time in which constriction is important, and that true freedom lies in the ability to move back and forth between these two states, depending on the needs of the given situation. He understood that his knee joint was teaching him about a constricting element of his nature, which was as much a part of him as his freely revolving spirit.

As a result of this work, the client did finally take his sabbatical and was surprised at the natural ease with which his study discipline returned to him, in absence of the struggle that he had experienced in his student years. During this period, he also developed a practice of yoga stretching and isometric exercises, in which he was advised to move slowly, focusing his awareness primarily on the process of constricting. His knee pains disappeared. Process work with body symptoms has been researched in a number of dissertations and articles (compare Ackermann, 1994; Camastral, 1995; Strachan, 1993).

We experience ourselves and the world around us through a number of modes. Process work defines these modes as channels. Some of these channels correspond with our senses, such as the proprioceptive, visual, auditory, kinesthetic, and olfactory channels. In process work theory, we also include the relationship channel, in which your experience of yourself is determined by the feedback of the individual to whom you are relating, and the world channel through which information about your process is provided by the world at large. Symptoms, like many other disturbances, can be experienced through any one of these channels. For example, an X-ray finding of a tumor becomes apparent through the world channel, since evidence of the tumor is discovered through information coming from the world outside. Channel differentiations are important because they direct the therapist about how and where to place the initial focus in the amplification of the disturbance (Mindell, 1985).

The complete meaning of the symptom will be revealed only through the unfolding of the experience in as many channels as possible, as in the example above, in which the initial proprioceptive experience is also unfolded in movement and in the world channel. Going further into these disturbances will lead to a moment of doubt, fear, or exhilaration, which might interfere with the next step in the unfolding process. This is the moment in which identification with the experience or with one of the figures arising in the unfolding process is crucial. This point, at which the everyday identity is directly challenged by the "dreaming" process, is referred to in process work theory

as the "edge." Edges can be recognized through sudden behavioral or physiological changes in the client, apparent in energy changes, agitation, hesitations, and autonomic nervous system responses such as blushing, sweating, stuttering, or yawning. We have learned through years of practice and investigation that these reactions are the result of the collision between aspects of the dreaming world and everyday identity. The goal in following an individual's process is not as much to eradicate an old identity as to raise awareness about the conscious and unconscious belief systems that create the initial marginalization. Awareness is raised in many different ways, depending on the process. Sometimes, the process calls for a linear discussion, which investigates the aspects of personal history, such as family values, traumatic experiences, etc., that formed and rigidified belief systems. Role-play is another method for raising awareness, in which belief systems are represented by figures that interact with one another around their different viewpoints. Further examination of the social constructs of these roles in regard to issues of race, gender, sexual orientation, class, age, etc., is also important in the process of gaining awareness.

Following his work with body symptoms and the development of a theoretical basis for the dreambody, Mindell began investigating the application of these insights for relationships. This research led to the birth of process work with relationships, based on the theory that unintended aspects of communication are manifested not only in content, but also in body language, tone of voice, gesturing, sentence structure, etc. They bring in first flickers of behaviors and attitudes and are attempts of the dreambody to add to an existing relationship a style or form that does not completely comply with preconceived ideas about how the relationship should be. When working with couples or families, we observe these unintended communication signals carefully and, with the consensus of the client, point them out and encourage amplification. In the same spirit that is applied in symptom work, we refrain from interpreting signals, asking instead that the client notice the signal and pick it up consciously, amplifying it further by creating out of it a figure or by going deeper into it to find something useful through the discovery of its essence. During this process, we look for the edge behavior described earlier and process the inner conflict that manifests.

The following example demonstrates how the same pattern first discovered in a body symptom also manifests in a relationship conflict. Two weeks later, the same client with the knee problem returned to work on a relationship issue in his marriage. He felt that his partner, to whom he had been mamed for 18 years, was constantly, "nailing him to the table," in his words. "Whenever something comes up with her," he complained, "we cannot have a decent, friendly discussion about our issues, but instead, we engage in a full-fledged

war in which she attempts to prove to me that I was wrong to begin with, and that I should admit my mistakes. She doesn't care about the relationship or me. I try to prove to her that she is part of the problem, but it is hopeless. She cannot be caught," he exclaimed, while making a catching movement with his hand. "She is slippery like a fish, always full of excuses." I encouraged him to continue with the hand movement, with which he was illustrating the manner in which he would catch a fish. While exploring this movement further, he suddenly developed a very centered expression on his face. He remembered an episode that took place during his childhood in the Canadian Southwest when he was trying to fish with bare hands. "You had to be very still and very concentrated," he recounted with moist eyes. "It was a spectacular occupation. Your complete focus was on the fish. You had to be calm, yet you could not lose the focus for one second. You had to be ready and waiting for the perfect moment to catch it in one decisive movement."

I suggested that we now apply this attitude toward working on the relationship problems with his wife. I encouraged him to focus on the fight from the previous evening as if he were trying to catch a fish. He became still and centered, quietly focusing on the events that had occurred. As a sudden smile broke out of his quiet stillness, he exclaimed, "This is unbelievable. Listening from this state, I hear something in her voice that I never heard before, a pleading tone. It is as if she were saying to me, 'Listen, let's not fight, have mercy on me!' or something. I always thought she enjoyed these battles, but now I am not so sure anymore." He later reported that in a consequent discussion with his wife, in which he shared with her his experience, she burst out into tears, exclaiming that for the first time, she felt seen by him. They both felt that this was a turning point in their attempts to resolve some of the issues between them.

Gaining awareness about double signals is a powerful method for bringing forth the dreaming in the relationship, which can potentially supplement the relationship with new and rejuvenating information. During our yearly relationship clinics, individuals from many different backgrounds, races, ages, nationalities, and sexual orientations come together to study and experiment with the application of these concepts. A number of publications also explore the ways in which the double signals of two different people are connected with one another and their importance in the transference and countertransference events (Goodbread, 1997).

The use of movement as described in the two previous examples has proved to be especially important in the unfolding of many different types of processes, as most people have considerably less awareness about the movement channel than they have about the visual and auditory channels. Because movement experiences are less controlled, dreaming is more accessible, and

the possibility for discovering unknown material that is further from everyday consciousness increases (Jobe, 1995; Schmitt, 1994).

Returning again to the example of the client with the knee problems, it is clear there is a similar governing pattern inherent in his body symptoms, relationship conflicts, and professional struggles, manifesting at different times as the constrictor, the catcher of fish, and the study room. This phenomenon is representative of the dreambody concept. It is evident that night dreams, unintended communication patterns in relationships, marginalized world issues, and unoccupied movement aspects are all expressions of the same pattern, displaying itself in different forms. The patterns appear to be mirroring one another. At night, the dreamer's consensus reality experience is defined by his body lying in bed sleeping. His subjective experience, however, is different. The "sleeper" is split off from consciousness, and identification is with the "dreamer." When the dreamer realizes that he or she is not only dreaming, but also sleeping, he or she is lucid dreaming. During the waking hours, the "sleeper," who is now called awake, defines the primary identity, and the "dreamer," who is now split off from consciousness, is experienced through body symptoms, relationship conflicts, and worldly problems. When we become aware of the dreaming experience during ordinary waking consciousness, we become daytime lucid dreamers as well (Mindell, 2000a).

The degree to which this identification is conscious is less important than the awareness of its presence and of the marginalized experience that seems to oppose the primary identity. As evidenced through Arnold and Amy Mindell's studies of working with people in comatose states (Mindell, 1988; Mindell, 1999), the support and unfolding of even the most minimal of signals can create state changes, without a direct relationship with the conscious mind.

In working with clients, these marginalized experiences portray not only a momentary vertical symmetry in terms of the channels in which they appear, but also a horizontal symmetry that becomes apparent over time. Mindell stated that the appearance of these individual patterns relates not only to the here and now, but also to a long-term process, which he has called "life myth" (Mindell & Mindell, 1992, p. 120f.), which first expresses itself in early childhood and is present throughout the course of a lifetime. As in the case of our client, in which the memory of the grasping of the fish brought forth the most numinous childhood experience, it is evident that the majority of chronic body symptoms and persisting relationship problems are organized around a polarity that has been present since early childhood, manifested in experiences and dreams. The life myth portrays a similar theme in different forms throughout a lifetime and into the experience of death. Is it possible that this mirroring system is nature's attempt at providing a bona fide experience of the numinosity of our individuation journeys in order to demonstrate

the spiritual essence at the root of all experiences, whether we label them material or emotional?

Dreams not only represent the marginalized patterns of everyday consciousness, but they also tell the story of the relationship between the two parts. In dream life, the everyday identity and the dreaming process meet as worthy opponents in a dramatic encounter. These two parts are most frequently expressed as polarities, whether they are in conflict, coexisting, or relating peacefully to one another. By dropping one level deeper into these polarities, we can discover what Mindell calls their " sentient essences" (Mindell, 2000a, pp. 82-85). The sentient essence is the seed out of which a signal or dream appears. It is the mysterious, miraculous, and awesome quality of something divine that we are touched by in the colors of the sunset. It contains both sides of the polarity, which become separate from one another as a by-product of the process of human consciousness. The sentient essence is similar to the Tao, which is contained in both yin and yang.

In the case described above, the dreamer gets closer to the sentient essence in his discussion about the thrill of total focus that he experienced fishing as a child. When asked later to bring this focus into the relationship channel, he does not "nail" his opponent, as expected, but rather "nails" every instance of the interaction through supreme attention and focus. The polarities begin to merge in his ability to be totally focused on every instance, while at the same time remaining completely open to whatever wants to happen. Absolute focus and complete freedom, experienced before as polarities, are now contained within one another. True freedom of mind is not possible without the ability to focus, and vice versa. In Zen meditation, this state of mind is called Mushm, originally translated as empty mind and is also defined by the Zen Master Fukoshima Roshi as free mind. The Roshi explains that this translation can be deceiving for the Western mind, since in the Western languages the word "freedom" implies freedom from some sort of constriction, while in the Japanese language the word "mu[7]' as used in "Mushin" means "free to," indicating an abandoned, detached, creative, forward process.

C. CURRENT TRENDS

1. Worldwork

Toward the mid-1980s, Arnold Mindell began to apply these basic process work principles to his work with groups. The Anthropos theory states that the world can be viewed as a humanlike organism. From this viewpoint, the planet

Keido Fukushima Roshi, Abbott Tofuku-ji monastery, Kyoto, Japan, personal communication with the author, 1997.

has a personal identity, and world conflicts are the expression of the internal conflicts of this creature, meant for her to get to know herself better. In this sense, the primary function of large group facilitation or public conflict resolution is to bring the opposing groups closer together and to develop more intimacy between them. Like individuals, groups develop and become attached to identities expressed in their values, behaviors, and rules of political correctness. Groups also define themselves by the avoidance of identification with subgroups and particular types of behavior that are controversial. These roles are called ghost roles, since nobody identifies with them, but their presence can be felt in a group. When taboo behaviors become manifest despite the efforts of the group to keep them at bay, or as process work theory would say, during the first flickers of the embodiment of a ghost role, the group itself enters into a type of altered state, called a hot spot. **A** hot spot is to a group's process as an edge is to an individual's process. These hot spots help groups to depart from their more "routine," primary modes of identification and to open up to dreaming, a process of awareness through which the group becomes more intimate with itself by getting to know itself at a deeper level. The basic tendency of most groups toward xenophobia is no different from that of individuals to become attached to their identities.

As mentioned, the ghost roles, dreamlike characteristics not owned by group members, are projected outside of the group. These characteristics manifest themselves within the group through double signals, which can be amplified, allowing the group to enter deeper into the dreaming process. The application of these aspects of process work in large group facilitation, conflict resolution, town forums, national tensions, and warring factions has been researched and described in detail (Menken, 1989; Mindell, 1995).

Diversity issues, such as racism, homophobia, classism, and sexism, are especially significant in group process. Mindell has coined the term "deep democracy" to describe a process that transcends the well-known democratic process of voting and majority rules through its understanding of community as the sum total of all sides, both mainstream and marginalized, whose voices are equally important for their unique contributions to the whole. This process occurs in a verbal and nonverbal dialogue form in which many issues are discussed, and power differences that create hierarchical structures can be openly addressed and processed. This phenomenon is exemplified in society as a whole through the processes of individuals who suffer from extreme states, often defined by allopathic medicine as psychosis. From a process-oriented point of view, individuals in extreme states express a marginalized part of the mainstream, embodying ghost roles. In this sense, extreme states serve an important function for the mainstream, relativizing through the representation of this polarity the reality of "normal" consciousness.

As illustrated in Mindell's city shadow (1987), the patterns that frequently manifest in the processes of people suffering from schizophrenia are antithetical to the governing beliefs of the given society. Results from a study made in Switzerland, which was the birthplace and teaching ground of Calvin, show that the basic polarity around work ethics, forming a large part of the country's history, are mirrored in the content of what appears to be the absurd behavior of people who suffer from schizophrenia, engaging in a seemingly irrational debate about the meaning of work and holidays. I have further expanded the application of these worldwork methods in my work with prison inmates and juvenile delinquents (Vikkelsoe, 1996). In-depth study of large group interactions, relationships, and inner psychic processes demonstrate observable symmetries on all levels, from the individual to the collective, creating a hologram that reflects a continual interplay of corresponding patterns (Mindell, 1989b, p. 55).

2. 24-Hour Dreaming

Mindell has since expanded the amplification theory. Process work now also includes theories about the effects of heightening awareness of countless little cues that reach our consciousness throughout the day. Unfolding these cues leads directly to the sentient essences at the root of the play of consciousness, which can be integrated to create a 24-hour (Mindell, 2000a) lucid dream walk. These theories, explained Mindell in his most recent work (Mindell, 2000b), are linked to modern physics, specifically to quantum mechanics, and portray a relationship between modern physics and ancient aboriginal cosmology that is surprisingly close.

In short, the process work paradigm states that the disturbing aspects of problems result from the perception that these problems are separate from one's self and are out of control. These out-of-control experiences signify a dreaming process that can be accessed at any time, either through skillful amplification of the disturbing signals or through minimal interferences of consciousness. It must be assumed that we live in at least two places at the same time. One life is performed on the stage called consensus reality, with roles that are assigned according to the culture and times. Consensus reality defines who we are as men and women in terms of ethnicity, sexual orientation, age, etc. Within these culturally accepted, central values are ideas about what it means to lead a fulfilling life in terms of health, relationship, family life, etc. The more we adhere to these culturally accepted norms, the more centrality (potential access to socioeconomic resources) we have.

As the society marginalizes groups and members who do not comply with its norms, most people also marginalize experiences that do not validate their

conscious roles. These experiences appear as what process work calls secondary processes, which challenge us to broaden our self-images beyond the limits of socialized roles. We are not only social beings, but are also spiritual entities on an awesome mysterious path of self-discovery. Once we consciously embark on this path, we realize that in a certain reality, the distinction between individuals is illusory, and we are mysteriously connected to one another through sentient experiences. Through the experience of meeting the other, we meet ourselves, and through this experience of oneness that transcends culture, denomination, and religion, we meet the divine.

The spiritual aspect of process work is best exemplified by the concept of the Tao, which cannot be spoken and is the creator and experiencer of all possible events. Needham, one of the foremost experts on Taoism and Chinese science, describes the Tao in this way:

> The symbolic correlations or correspondences all formed part of one colossal pattern. Things behaved in particular ways not necessarily because of prior pattern or impulsions of other things, but because their position in the ever-moving cyclical universe was such, that they were endowed with intrinsic natures which made that behavior inevitable for them. If they did not behave in those particular ways, they would lose their relational positions in the whole (which made them what they were), and turn into something other than themselves. (Needham, 1956)

II. RELEVANCE FOR THE HEALTH FIELD

Process work employs a phenomenological approach in its description of symptoms and disturbances. In this paradigm, the traditional concepts of health and disease apply only insofar as they belong specifically to the description of the client's experience. Process work does not function within a framework that defines a state of health in terms of pathology, but instead views the disturbance as having the potential to balance the conscious attitude of the individual who is unconsciously looking for more wholeness. Frequently, processes reach an increased energy point when individuals come to an edge, and it it is helpful to have a facilitator present who brings more awareness to this experience. We have learned over the years that through the unfolding process, even the experience of "being stuck" may also prove to be important and meaningful. From a process work viewpoint, health, which is etymologically related to wholeness, is not defined by a particular physiological state or by the ability to function in a consensus reality world, but rather by the joining of one's physical, emotional, and spiritual fates, connecting with the experiences that are occurring, and, through this process, becoming more intimate with oneself and more whole.

Symptoms often appear and disappear out of nowhere, suggesting that nature itself has a tendency toward self-organization and self-healing. Methods solely geared toward overcoming symptoms can inadvertently strengthen the persistence of the symptoms by supporting the conscious attitude that was part of their initial creation. Because the process work paradigm refrains from labeling states and experiences within a system of pathology, it tends to evoke less resistance. The tension resulting (Goodbread, 1987, p. 204f.) from a natural experience trying to come forth despite the existence of a belief system that is inhibiting is apparent at the edge. At this point, the client will discover in the therapist a companion with whom the tension can be processed. This approach is more effective for many people than an approach that navigates between narcissistic wounding and relationship to reality as a means for gaining insight into what is considered to be a neurotic structure, which is more common among psychoanalytically influenced schools.

The process work principle states that awareness of the various existing processes is the only requirement for change and that this acquired awareness will help to facilitate nature's self-organization. The understanding of a process through its expression in many different channels allows for a more holistic treatment. For example, the reluctance to enter chemotherapy following the diagnosis of a tumor can be unfolded and understood in correlation with the experience of the tumor itself, the relationship issues confronting the client, the immediate transference issues between client and therapist, and possible relationship issues between the client and members of the medical profession, creating the possibility for a more differentiated set of interventions than if the processes were considered separate from one another.

III. ISSUES OF SAFETY AND COMPATIBILITY WITH CONVENTIONAL CARE AND CONTRAINDICATIONS

Ten years ago, Arnold Mindell and I created the Lava Rock Clinic Network (Schwarz, 1993). Our staff consists of diplomate process workers, Western medical doctors, acupuncturists, chiropractors, and herbalists. We understand that each of these models has its own advantages, addressing different realms of the human experience, and that the different models are complementary. We support our clients in their processes of applying all the models they find helpful on their paths to recovery. Allopathic medicine, pharmaceutical discovery, etc., are as much expressions of the dreamtime as are any other

forms, and you can find caring, competent professionals as well as charlatans among licensed and unlicensed, mainstream and nonmainstream professionals.

A. METAPOSITION

When working with a client, it is necessary to first establish the presence or absence of a metacommunicator. The metacommunicator functions as a witness who can relate to the experiences as they occur and work on them consciously. If it is determined that a metacommunicator is present, then the process is focused on assisting the witness in making conscious decisions about which aspects of the experience should be followed. If no metacommunicator is present, the therapist is the only witness and must therefore apply different methods. As described by Mindell (1987) in ***City*** Shadows, one possible intervention is to congruently take over the patient's role, which will "flip" the patient into becoming the witness. There are many states in which a metaposition is not accessible due to extreme affects, drug-induced states, or organic causes.

B. FEEDBACK

Process work training involves an extensive period of nonverbal signal study, in live supervision, and video analysis. Nonverbal signal awareness is essential for the recognition of the client's nonverbal positive or negative feedback toward interventions. In our work with clients, we check at each step for verbal and nonverbal feedback. Proceeding with a process without verbal and nonverbal consensus from the client is contraindicated. Process work does not recognize "resistant[7]' clients, but rather therapists that are inattentive to feedback. For a verbatim report about the practical applications of this method, read Goodbread (1987, pp. 77-1 13).

IV. RESEARCH, EXPERIENCE, AND THE L E V E L OF SCIENTIFIC DOCUMENTATION

The bulk of the development of process work has been created by the Mindells, as the many books indicate. In addition, many publications and

studies research the theoretical and clinical aspects of process work. As of this date, there are, for example, over 30 doctoral dissertations published on a variety of themes in the area of process work.

In process work terms, "success" of an intervention is measured by the subjective feedback of the client, expressed both through verbal and nonverbal signals. Due to the nature of this paradigm, quantitative research, which measures the success of methodologies through the process of controlled, repeatable assays, is complicated. However, despite this difficulty, there are currently at least two research projects in progress that are based on quantitative research: the first, an investigation of the sense of well-being as related to a subjective experience of centrality, as measured by the before and after treatment experiences of participants at the Lava Rock Clinic network, and the second, a study at the Queensland Institute of Technology of women with breast tumors, correlating the experience of going over edges with changes in immune factor levels. The Lao-Tse Press has published many articles in the *Journal for Process Oriented Psychology,* including qualitative studies, single case studies, narratives, and theoretical articles. The Lao-Tse Press is also the source for all publications of process work, including the many books by Arnold and Amy Mindell and other process work researchers.

V. SIMPLE TREATMENT

The methods described in this chapter and the process work paradigm can be applied to all problems. Each individual process is different. For example, in process work with addictions, we try to discover the dreaming process that enters the client's consciousness through an addictive tendency. The patterns found in the craved experience are looking for more conscious integration into the client's life. The following brief excerpt from the work of an individual with a sugar addiction at the lava rock clinic network illustrates this process. The process is a condensed portrayal of a 45-minute interaction.

Jason: I would like to work on my sugar addiction.

Max: What is your most favorite sweet?

Jason: A hot fudge sundae.

Max: Can you give me a sensory grounded description of what it is like to eat a hot fudge Sundae?

Jason: It starts like the hot on the cold and it melts. Oh, it's been so long. Ruuumph. *(Jason's eyes are glowing and his voice sounds sensual as he describes the sundae.*)

Max: It's the sweet hot and the sweet cold and the things melting.

Jason: *(He laughs, then backs away, looking embarrassed.)* This is so embarrassing. I can taste it, *he exclaims, while making a sensual wavelike dance movement. (He is blushing and giggles.)*

Max: You have the most amazing way of moving, keep going, it has a great feel to it.

(Max tries to match his movement and also makes the mmmhhh sound that Jason made. He is mirroring Jason's description and asks him to go on with the wiggle. Jason hesitates for a moment and then returns to it again, laughing and repeating the movement. He is shy about the movement. He then starts to dance/move as in the beginning with his whole body.)

Max: Imagine you're seeing someone else moving like this. What would you see them doing?

Jason: *(He is walking and at the same time now dancing gracefully in the same fashion as he moved before.)* They would just slip through the world, they would glide through, instead of fighting their way through. *(He is gesturing, portraying the walk that reminds him of a slow sensual dance.)*

Jason: It's like sexy music. Like saxophone. . .

Max: Music. *(One of the seminar participants does a stunning sax imitation.)*

Jason: I have to close my eyes. It's very romantic, I want the lights down.

Max: I see an unusual and special expression in your face. How beautiful. Keep going.

Jason: Yeah, there is something.

Max: Go back there one more time. Catch that face that you just made, it belongs to that movement.

Jason: I'd love to go through life that way. *(At this point, he looks completely changed, all soft and glowing.)*

Max: Don't ever stop. What would it be like to go through life like this?

Jason: *(Puts hands up and blows out a little.)* Looks like it will go up and out. Expansive. I want to take everything life has to offer. There's a yes to tension in it. The good and the bad, I want to say yes to both.

Max: Yes, it's the cold and the hot. Slip through life like that.

Jason: I think life is saying to me: Live me! And I am wide open to life in this state, I want to say, come and live me.

Max: *(Repeats)* Yes to life. Yes to everything in it, the ups and the downs. Give me the ups and downs. The hots and the colds. I'm wide open, live me.

In the process above, the addictive tendency balances Jason's conscious attitude to control life, to get depressed over difficult things, and to search for happiness only. The addictive process is the outer manifestation of a dream inviting him to appreciate life with its changing course, its laughter and its tears, as a gift. Like many addictive processes, the underlying pattern is deeply spiritual and is expressed in Zen Buddhism with the statement of Ummon, one of the ancient Zen patriarchs: Every day is a good day, even a bad day is a good day.

VI. TRIAGE: T RAINING AND CERTIFICATION: HOW TO RECOGNIZE A QUALIFIED PROVIDER

The international training program for process work has centers throughout North America, Europe, Australia, Japan, India, and Russia. The diploma program in process work can be completed in 4-5 years and consists of theoretical and clinical training. Certified process workers can be recognized by the title, Diplomate of Process Work. Frequently, professionals that have already established themselves in other careers, (e.g., allopathic practitioners, acupuncturist, nutritionists, or psychologists, and counselors) enter the certificate program, which can be completed in 2 years. This is a training program that can be designed to fit the special needs of the practitioner, who may apply the work in his or her professional practice, agency, or organization. The certificate of process work recognizes that the recipient has mastered the basics of process work and has completed a substantial amount of therapy and supervision, but has not endeavored the rigorous requests of the diploma program.

The faculty of the Process Work Center, including Arnold and Amy Mindell, also offer each year in January a 5-week long intensive course that covers the basics of process work. The Process Work Center of Portland, OR, one of main hubs of the international training program, offers an MA in process work in conjunction with the diploma program. The prices for therapy are comparable to prices for other depth psychology treatments, and the amount of time in therapy ranges greatly, depending on the process, dreams, and feedback of the client. Training can amount from a total of a few sessions to many years of journeying. To ensure professional and ethical facilitation, the ethical guidelines of process work clearly state the duties and boundaries of the practitioner, which are based on the process-oriented awareness model, and are being discussed and updated by an ethical committee, which also hears grievances from clients.

VII. RESOURCES

Intensive Course
Process Work Center
Portland, OR 97209
PhoneFax: (503)225-9784
E-mail: intensive @ igc.org

Lao Tse Press
P.O. Box 8898
Portland, OR 97209-8898
Website: www.laotse.com

Process Work Center
N.W. Hoyt St.
Portland, OR 97209
E-mail: pwcp @ igc.org
Website: www.processwork.org

Arnold and Amy Mindell
www.arnoldandamymindell.org

Max Schupbach
PhoneFax (503)2 10-0314
E-mail: max@maxfacilitation.net

Lava Rock Clinic
PhoneFax (503)242-1273

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Chapter 18

Herbal Medicine

Hyla Cass, MD
Jerry Cott, PhD

I. INTRODUCTION

The World Health Organization estimates that 80% of the world's population relies on herbal medicine. Meanwhile, the use of herbs in the United States is expanding rapidly to the point where herbal products are readily found in most pharmacies and supermarkets. From 1990-1997, as the use of Complementary and Alternative Medicine (CAM) rose from 34-42%, herbal use quadrupled from 3-12% (Eisenberg *et* al., 1998).

It is worth remembering that these rapid changes have come not through the medical profession, but by popular demand. The public has discovered that natural medicines often provide a safe, effective, and economical alternative to

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pharmaceuticals, and research validates this finding. The majority of those who use herbal and high-dose vitamin products fail to tell their physicians. Either they assume "natural" products are harmless and not worth mentioning, or they fear being ridiculed by doctors skeptical about their use. These same doctors, however, must begin to familiarize themselves with the subject. Aside from the advantages of the natural products, herb-drug interactions are a growing concern: Almost one in five prescription drug users are also using supplements (Eisenberg ***et*** al., 1998).

In Europe, there is less of a problem because herbs are classified with other pharmaceutical products and routinely prescribed by doctors. In fact, prescriptions of St. John's wort in Germany outnumber those for all other antidepressants. Most of the research to date is European, since their drug companies have the financial incentive to do the necessary research. The United States has recently joined in, and the National Institutes of Health (NIH) Office of Alternative Medicine and the National Institute of Mental Health (NIMH) are just completing a $4.3 million joint clinical trial to determine the efficacy of St. John's wort (SJW) in major depression. Other herbal studies are now in progress at a number of America's major medical universities.

In the Eisenberg survey, two of the top five conditions for which consumers sought alternative treatment were anxiety and depression. Besides SJW, there are other herbs also increasing in popularity for addressing these and related problems: kava for relief of stress and anxiety, ginkgo biloba for senile dementia or benign forgetfulness, and valerian for sleep. **A** $20 million NIH trial comparing ginkgo to placebo in the development of dementia in normal elderly persons began in 2000.

II. HERBS VERSUS PHARMACEUTICALS

Many of our current drugs are actually derived from plants. Common examples are morphine, a potent painkiller, from the opium poppy; digitalis, the heart medication, from foxglove, and the antihypertensive, reserpine, from rauwolfia (Indian snakeroot). In many cases, pharmaceuticals may still be the treatment of choice. However, when appropriate, herbs are often preferable for the following reasons:

- Herbs are less likely than pharmaceuticals to cause side effects which, when they do occur, are generally far milder. In fact, in their absence, patients often do not notice the subtle improvements that occur as these natural medicines begin to take effect. This contrasting lack of side effects may also confound double-blind studies comparing the two. A partial explanation for the milder side effects may be that the original plant constituents are more compatible with our chemistry.

- Although the isolated active ingredient has been assumed to be most efficient, there are advantages to using the whole plant. While Western medicine seeks to isolate a single active ingredient, herbal medicine relies on the synergistic action of a plant's many constituents.
- These combinations may also yield a variety of effects. For example, by its action on the brain, kava acts as an anxiety-reliever, while its relaxant effects are due to its direct action on both smooth and striated muscle.
- Herbs are working physiologically to restore balance rather than simply targeting a symptom. As a result, herbs often tend to take effect more gradually than pharmaceuticals.

III. SAFETY

Side effects of psychiatric drugs can be serious, the worst being death by overdose. According to one report, overdoses yielded an annual rate of 30.1 deaths per one million prescriptions of antidepressant. On the other hand, to quote Norman Farnsworth, PhD, professor of Pharmacognosy at the University of Illinois, Chicago: "Based on published reports, side effects or toxic reactions associated with herbal medicines in any form are rare. . . . In fact, of all classes of substances. . . to cause toxicities of sufficient magnitude to be reported in the United States, plants are the least problematic[7]' (Upton, 2001). It is important to caution patients that if they feel any ill-effects from an herbal product, they should inform the prescribing doctor. Then, depending on the severity, the patient should either reduce the dose or stop taking the herb altogether. Unlike pharmaceuticals, withdrawal reactions are rarely an issue.

IV. HERB-DRUG COMBINATIONS

It is essential to obtain a complete drug and herbal history. There are contraindicated combinations, which will be covered individually. On the other hand, there are many combinations that work well together. For example, individuals taking a drug that is metabolized by the liver can be protected by the liver-supporting herb, milk thistle (Silybum marianum).

A. USE IN PREGNANCY, NURSING, AND WITH CHILDREN

Many herbs have not been approved for use by pregnant and nursing women. We refer to the guidelines of the German Commission E, the

equivalent of the U.S. Food and Drug Administration (FDA). Now available in English translation, the German Commission E has published a collection of reports based on safety and efficacy data on more than 200 herbs (Blumenthal *et al.,* 2000).

Herbs are often the treatment of choice for children. Despite lack of modern research, centuries of use have shown many products to be safe when dosed appropriately by weight. An excellent resource on the use of natural products, for both parents and clinicians, is Zand's book, *Smart Medicine for a Healthier Child* (Zand *et al.,* 1998).

B. USE IN THE ELDERLY

Considering the use of polypharmacy in the elderly and problems of impaired metabolism and clearance, herbs offer a good alternative to drugs. On the other hand, we also must be aware of herb-drug interactions. SJW can be very useful for depression in the elderly, ginkgo for cognitive decline, and kava for sedation, without the adverse effects of the benzodiazepines. These herbs can be used in combination with each other as well.

V. THE SELECTION AND USE OF HERBS

A. STANDARDIZED EXTRACTS

For those new to the medicinal use of herbs, dose selection can be confusing. As pointed out, unlike synthetic drugs containing a single compound, herbs often have a number of different active ingredients. Even these will vary in proportion, based on many factors including where the plant was grown and when (season or even the time of day) it was harvested. The manufacturer will adjust the mixture to account for these variations.

In order to *standardize* the product, that is, to have a consistent, measured amount of product per unit dose, one ingredient is selected as the marker, usually the presumed active ingredient. Though research may reveal different or additional active ingredients, for convenience the designated constituent will usually remain the accepted marker. We see this demonstrated in the following example.

SJW is standardized to hypericin, the long-accepted active antidepressant ingredient. Further research, though, has found hyperforin to be the likelier candidate. Some SJW products are actually standardized for both. In any case, all compounds (even as-yet-undiscovered contributors) remain

distributed throughout the plant, alongside the hypericin. As a result, the standardization of hypericin serves as a useful guidepost for the strength of all the (active) ingredients.

Hypericin content is listed on the label, with most products using a 0.3 % concentration, so that a 300-milligram capsule contains 0.9 mg (0.3 X 300 milligrams) of hypericin. In kava, the marker is kavalactones, and in ginkgo, flavone glycosides and terpene lactones.

B. LABELING LAWS AND RESTRICTIONS

Herbal products are regulated by the FDA as "dietary supplements." In 1994, the U.S. Dietary Supplement Health and Education Act (known as DSHEA) set new guidelines with regard to the quality, labeling, packaging, and marketing of supplements. It also sparked a surge of interest in herbal products. DSHEA allows manufacturers to make "statements of nutritional support for conventional vitamins and minerals." Since herbs are not nutritional in the conventional sense, DSHEA allows labels on herbs to make only what they call "structure and function claims," but no therapeutic or prevention claims. Thus, a SJW label can claim that it "optimizes mood but cannot say that it is a "natural antidepressant," which would be a therapeutic claim.

Since the labels (by law) give insufficient information, it is particularly important for the health practitioner to be well educated in this area. Ideally, supplements would be labeled so the purchaser would know exact indications and possible side effects, as with over-the-counter (OTC) medicines.

C. QUALITY ISSUES

DSHEA requires manufacturers to follow current Good Manufacturing Practices (cGMPs) to assure quality, safety, integrity, and truthful labeling information. The product contains the ingredients and quantities as labeled and without such contaminants as bacteria, molds, or pesticides. Unfortunately, these cGMPs are not always adhered to. There are cases of contamination, misidentified product, purposeful adulturation, or use of a cheaper substitute. This wide variation in the quality and content of commercially available preparations can also affect clinical results. We have seen patients who do well taking one brand, then upon switching to another, experience a decrease in effectiveness, and vice versa. Side effects can vary too. Similarly, some patients may experience side effects such as gastrointestinal irritation from poorer brands, while tolerating higher quality brands.

Various trade organizations, such as the American Herbal Products Association (www.AHPA.org), promote adherence of manufacturers to the highest standards. Overall, we recommend buying herbal products from a recognized manufacturer.

D. DOSAGE FORMS

Herbs can be purchased as teas, tinctures, tablets, and capsules. Teas and tinctures, being liquid, are absorbed more rapidly and have a shorter duration of action. Tinctures are made by soaking one part herbal material with *5* or 10 parts by weight of alcohol, making a 1:5 or *1:10* concentration. To remove the alcohol taste, the tincture can be placed in warm water or tea for a few minutes to let the alcohol evaporate. Glycerin may also be used instead of alcohol, but the resulting extract is weaker.

Capsules and tablets are the most common delivery system. Gelatin or vegetable-based capsules are filled with powdered dried herb, while tablets are powdered herbs, compressed into a solid pill, often with a variety of inert ingredients as fillers.

They are supplied in a variety of sizes and strengths, so it is important to read the label carefully. The label will also usually give an average suggested dose as a guideline, based on research and clinical use. We recommend starting at the low end, watching for a response, including unwanted effects, and adjusting the dose accordingly.

For example, some patients do well on 300 milligrams of SJW once a day, while others need four times that dose. Most will fall in the middle, with the recommended 300 milligrams three times daily. Some herbs such as kava take effect immediately, while others take days, weeks (SJW, ginkgo), or even a month or two, depending on the individual's biochemistry.

VI. USE OF HERBS IN PSYCHIATRIC PRACTICE

This chapter summarizes the current state of knowledge of some major botanicals that have psychotherapeutic effects-ginkgo, valerian, kava, passionflower, and St. John's wort-and includes potential drug-herb interactions. This is by no means a comprehensive list, but it highlights the ones most commonly employed to affect mind and mood. Some others that deserve our attention include reishi mushroom, ginseng, California poppy, hops, and skullcap. A number of excellent books and Web sites on the subject are listed at the end of the chapter.

A. GINKGO *(GINKGO BILOBA)*

More than 200 million years old, the ginkgo is the oldest surviving species of tree on the planet, with many living to be 1000 years old. The most widely prescribed herb in Germany, with over 6 million prescriptions written in 1995, ginkgo leaf extract also topped the United States market in herbal sales for 1997. Ginkgo is used to treat memory problems and dementia, as well as circulatory problems. The activity of ginkgo leaf is due to a number of compounds found in the extracts, including the flavone glycosides (flavonoids) and terpene trilactones (terpenoids).

1. Uses

A number of well-controlled clinical trials show ginkgo to be useful in the treatment of cognitive impairment and dementia caused by either degenerative mechanisms or cerebral insufficiency (insufficient blood flow to the brain) in the elderly. This syndrome consists of difficulties of memory and concentration, confusion, fatigue, depression, tinnitus (ringing in the ears), and headache, and is believed to be vascular in origin.

Ginkgo leaf extract may improve oxygen consumption, and enhance peripheral and cerebral blood flow. It promotes relaxation of blood vessel walls, enhanced utilization of oxygen and glucose, and decreased inflammation due to inhibition of platelet-activating factor (PAF) (Kleijnen & Knipschild, 1992a). For a more comprehensive review of the in ***vitro,*** animal, and clinical studies on ginkgo leaf, see DeFeudis (1998). The following discussion highlights some of the many promising studies.

2. Research

In 1992, a meta-analysis was published comprising 40 controlled trials using ginkgo to treat cerebral insufficiency. In 26 studies, the group receiving ginkgo did significantly better than the control group. In 13 studies, there was a trend toward a benefit for some but not all measured effects. Of the eight well-performed trials, all showed a significant benefit for the ginkgo group (Kleijnen & Knipschild, 1992b).

In addition to this convincing review, there are some more recent studies, as follows.

A randomized, double-blind, placebo-controlled trial of 309 patients with Alzheimer's or multi-infarct dementia found that patients receiving 120 milligrams of ginkgo extract (EGb 761) daily scored higher on the

Alzheimer's disease Assessment Scale-Cognition subscale (ADAS-Cog), a performance-based cognitive test (Le Bars *et al,* 1997). After a year of treatment, 29% of patients receiving ginkgo showed at least a *4-point improvement* (4 points is the average amount of *decline* seen in Alzheimer patients over a 6-month period) on the test compared with 14% of those receiving placebo. This difference is comparable to that achieved on high-dose tacrine, a 4-point improvement in 40% of those receiving the drug versus 25% of patients on placebo (Knapp *et al,* 1994).

To varying degrees, ginkgo acts as an *antioxidant,* or scavenger of *free radicals,* which have been considered the mediators of the cell damage observed in brain aging, including in Alzheimer's disease (DeFeudis, 1991, 1998; Oyama *et al,* 1994).

3. Adverse Effects

In a German observational study of 10,815 patients treated with ginkgo (LI 1370), only 183 reported some mild side effects. They included nausea (37), headache (24), stomach problems (15), diarrhea (15), allergy (10), anxiety/restlessness (8), sleep disturbances (6), and "other" (68).

The toxicity of ginkgo leaf extracts is very low. In rats, extremely high doses were unable to kill them. No evidence of cancer or genetic mutations were found in animals treated with ginkgo, nor were any birth defects found in the offspring of treated pregnant females (Hansel *et al,* 1993).

Since ginkgo has an anticoagulant effect, it has been associated with serious bleeding problems in rare cases, three that have been published. These include two cases of spontaneous subdural hematoma, subarachnoid hemorrhage and mildly increased bleeding time, and spontaneous bleeding from the iris, all in persons taking other medications (also with anticoagulant effects) -coumadin, acetominophen, and aspirin (Rosenblatt *et al,* 1997; Vale, 1998). All recovered with no after-effects.

4. Dosage

The typical dose of ginkgo is 40-80 milligrams three times daily of a 50:1 extract standardized to contain 24% ginkgo flavone glycosides and 7% terpene lactones. It may take up to six weeks before yielding any results.

Warning: Ginkgo should not be used with anticoagulants or by patients with clotting problems without medical supervision.

B. KAVA *(PIPER METHYSTICUM)*

1. Uses

This psychoactive member of the pepper family has been used historically in the South Pacific islands as a ceremonial and recreational tranquilizing beverage (Ford, 1967; Singh, 1992). It is an approved medication in Germany for "states of nervous anxiety, tension, and agitation" in doses of 60-120 mg of kavalactones for up to three months' duration (Schulz, *et al.,* 1998). Rather than implying any danger in continued use, the three-month limit is more likely a suggestion that one should explore other causes for the anxiety, including those amenable to psychotherapy and stress-reduction techniques.

Kava is increasingly popular in the United States for short-term relief from anxiety and stress. This includes successful use for such stressors as fear of flying and performance anxiety. In one example, a 28-year-old screenwriter reported that he took kava (2 X 60 milligram caps) successfully to overcome presentation "nerves," with no impairment in his ability to concentrate and perform (Cass, 1998). The muscle relaxing effects make it particularly useful in treating headaches, backaches, and other tension-related pain.

2. Research

In clinical studies, kava has been compared favorably to both placebo and benzodiazepines. Unlike the benzodiazepines, however, kava is unlikely to produce tolerance, withdrawal, addiction, or morning-after drowsiness. In lower doses, it may even enhance rather than impair cognitive function (Miinte *et al.,* 1993). Following are a few of the many positive studies on kava.

3. Kava versus Placebo

In a randomized, double-blind, placebo-controlled trial, 58 patients with diagnosed anxiety and neurotic disorders were randomly given either 70 milligrams of kavalactones (extract WS 1490-Laitan®) or placebo three times daily for four weeks. Unlike the placebo group, the kava group showed a significant reduction in anxiety assessed by the Hamilton anxiety scale (HAMA) with minimal side effects (Lehmann *et al.,* 1996).

The longest-running study with the most subjects to date was done by Volz and Kieser in 1997. A randomized, double-blind, placebo-controlled, multicenter study of 101 outpatients with DSM-IIIR anxiety disorders (agoraphobia, specific phobia, generalized anxiety disorder, adjustment disorder with

anxiety) were treated with the kava extract, WS 1490 (210 milligrams per day in divided doses) for 24 weeks. The results showed significant reductions in the HAMA in the kava group beginning in the eighth week and increasing throughout the trial. Improvements were also seen in somatic and psychic anxiety, Clinical Global Impression (CGI), Self-Report Symptom Inventory, and Adjective Mood Scale. Moreover, there were no negative effects on clinical chemistry, hematology, or vital signs, nor did any tolerance develop.

In a placebo-controlled trial, 58 patients with anxiety received 210 milligrams of kava or placebo daily for a month. Compared to placebo, those receiving kava had significantly greater reductions in HAMA scores starting at one week (Kinzler *et al.,* 1991).

4. Comparison with Benzodiazepines

In a comparison treatment study, a daily dose equivalent to 210 milligrams of kavapyrones was compared with 15 milligrams per day of the benzodiazepines, oxazepam, or nine milligrams per day of bromazepam for six weeks. In the 164 patients who completed the trial, HAMA ratings did not differ significantly among the three groups (Woelk *et al.,* 1993).

In 12 healthy volunteers, a kava extract was compared with oxazepam in a double-blind crossover study of event-related potentials and recognition memory. While oxazepam impaired both of these, kava actually slightly enhanced them (Miinte *et al.,* 1993).

5. Kava for Menopausal Symptoms

A study of kava for menopausal symptoms in 40 women using doses of 30-60 milligrams per day for a minimum of 56 days found significant improvements in anxiety, hot flashes, sleep, and a sense of well-being, as well as in the HAMA scale and Kupperman index (Warnecke *et al.,* 1990). In a followup study in 40 women (20 on placebo and 20 on 210 milligrams per day), similar effects were reported (Warnecke, 199 1). In my clinical practice, I have found kava excellent for this purpose, as well as for treating symptoms of premenstrual syndrome (PMS).

6. Active Constituents

The active constituents are the kavalactones or kavapyrones, including kawain, dihydrokawain, methysticin, and dihydromethysticin (Schulz *et al.,* 1998). Kavapyrones are absorbed by the gastrointestinal tract and cross the blood-brain barrier (Keledjian *et al.,* 1988). They act as skeletal muscle relax-

ants and anticonvulsants (Meyer, 1967). Unlike the benzodiazepines, kava does not act directly on the GABA receptors. Rather, it likely has an *indirect* effect on this calming neurotransmitter. In addition, several kavapyrones, including methysticin and dihydromethysticin, are potent uptake inhibitors of the stimulating norepinephrine (Seitz *et al.*, 1997), which can lead to mood-elevating effects.

7. Adverse Effects

Therapeutic doses may result in mild gastrointestinal complaints or allergic skin reactions (incidence ~ 1.5%) (Schulz *et al.*, 1998). Chronic use of kava up to 100 times the therapeutic dose results in a scaly, yellow rash known as kava dermopathy, often accompanied by eye irritation (Norton & Ruze, 1994). This completely resolves when the kava is discontinued.

Kava extracts have been tested in formal chronic (26 week) toxicity studies in rats (up to 320 milligrams per kilogram) and dogs (up to 60 milligrams per kilogram). The high dose showed only mild histopathological changes in liver and kidneys. There has been no evidence of mutagenic, teratogenic, or genotoxic potential in standard assays (Hansel *et al.*, 1993).

In contrast to some earlier German reports, a recent clinical trial showed an additive effect of kava and alcohol on impairment and cognition (Foo & Lemon, 1997). This is in keeping with Jamieson and Duffield's (1990) study in which the hypnotic actions of kava and alcohol were found to be potentiated in mice. One anecdotal report suggests kava may interact with benzodiazepine metabolism (Almeida & Grimsley, 1996). A 54-year-old man on daily doses of alprazolam, cimetidine, and terazosin was hospitalized after experiencing acute lethargy and disorientation three days after starting to take kava. However, he recovered fully within several hours.

In a letter to the editor, several German neurologists advised caution regarding the use of kava extracts to treat patients, especially elderly ones, with Parkinson's disease or similar conditions (Schelosky *et al.*, 1995; detailed discussion in Cass, 1998, p.153).

8. Dosage

As an antianxiety agent, the recommended dose of kava is 40-70 milligrams of kavalactones three times daily, not to exceed 300 milligrams a day. The usual dose for insomnia is 210 milligrams of kavalactones, one hour before bedtime. Most available products are 30-55% kavalactones. Thus, a 250-milligram capsule of a 30% extract contains 75 milligrams of kavalactones, and a 175-milligram capsule of 40% extract contains 70 milligrams.

While one can feel the effects immediately, the full antianxiety effect often takes about one week to develop, reaching full benefit in 4- 8 weeks.

Warning: It is recommended that caution be used when combining kava with either alcohol or drugs that suppress the central nervous system (CNS), since their effects can be additive. On the other hand, during a gradual withdrawal program from benzodiazepines, I have safely prescribed kava in increasing doses, often in combination with valerian, with excellent results.

C. PASSIONFLOWER *(PASSIFLORA INCARNATA)*

1. Uses

According to the German Commission E (Blumenthal *et al,* 2000), passionflower is used as a mild sedative, usually in combination with other herbs. It appears to be safe. There are no clinical trials on its use as a single agent.

2. Research

A double-blind trial in 182 patients with adjustment disorder accompanied by anxious mood of a compound containing six extracts including passiflora, crataegus, ballota, valeriana, cola, and paulinnia found that the herbal mixture was superior to placebo in improvement in the HAMA (Bourin *et al,* 1997).

Passionflower contains flavonoids, alkaloids, and fatty acids (Newall *et al,* 1996; Pizzorno & Murray, 1999). It is not clear what components of the plant are responsible for its sedative effects. It has been reported that chrysin (5,7-dihydroxyflavone), a flavonoid derived from *Passiflora coerulea,* could account for the activity of the plant. It is a partial agonist of benzodiazepine receptors and has anxiolytic activity in mice without inducing sedation or muscle relaxation (Wolfman *et al,* 1994).

3. Adverse **Effects/Interactions**

No acute toxicity was observed in mice injected with up to 900 milligrams per kilogram (ESCOP, 1997). No contraindications, side effects, or interactions are reported by the German Commission E (Blumenthal *et al,* 2000).

4. Dosage

The recommended dose is 100-200 mg of standardized extract per day.

D. VALERIAN *(VALERIANA OFFICINALIS)*

1. Uses

Valerian is an unpleasant-smelling, popular European botanical medicine used for its mild sedative and tranquilizing effects. Derived from the plant root, it is usually standardized according to the content of volatile oil and valerenic acid, the likely source of its CNS activity. A recent monograph on valerian includes information about analytical methods for active constituents, as well as a review of the pharmacology and toxicology (Upton *et al,* 1999).

2. Clinical Research

An herbal preparation containing *Valeriana officinalis* as one of a mixture of herbs was compared with both a valerian-only extract (400 milligrams) and placebo in 166 subjects with a range of sleep quality. Each person received three of each pill, which were taken in random order on nonconsecutive nights. Both valerian preparations produced a significant decrease in the time needed to fall asleep (sleep latency) and improvement in sleep quality. Night awakenings and dream recall were not affected by valerian, nor did valerian cause any morning-after drowsiness (Leathwood *et al,* 1982).

A recent open-label study of valerian and insomnia enrolled 23 male and female symptomatic Hispanic volunteers (Dominguez *et al,* 2000). Eleven of them were diagnosed with major depression, four with generalized anxiety, two with schizoaffective disorder, two with primary sleep disorder, and one with dysthymia.

They were given a bottle of a local brand of valerian capsules (Nature's Way, 530 milligrams valerian root) and were instructed to take one each night 30-60 minutes before retiring. They were allowed to increase to two capsules after the third night and to three after the first week.

The primary outcome was a self-rated ordinal scale symptom questionnaire at baseline and at the end of weeks 1 and 2. At the end of week 2, most patients described the medication as "extremely helpful." No side effects were reported, and most said they would purchase this product themselves if their insomnia continued or reoccurred. The distinctive odor of valerian may present difficulties in designing a plausible placebo for a controlled trial.

3. Comparison with a Benzodiazepine

Dorn (2000) reported the result of a double-blind, comparative study in outpatients from eight general practitioners. Seventy-five patients between **18** and

70 years of age were randomly assigned either to the test group (two doses of 300 milligrams of valerian extract, LI 156) or control group (two doses of 5 milligrams of oxazepam for 28 days, 30 minutes before bedtime). The products were equally effective in improving sleep quality, well-being, and anxiety (HAMA), but valerian had fewer side effects. Five subjects withdrew due to possible adverse drug reactions (two reacted to valerian, three to oxazepam), none serious.

The active constituents and precise mechanism of action are not proven. However, its effects may be due to valerian's high concentrations of the calming amino acids, GABA, glutamate, and glutamine in valerian (Santos *et al.,* 1994) (ESCOP, 1997).

4. **Adverse** Effects/Interactions

Valerian appears to be quite safe. In an unsuccessful suicide attempt, an 18-year-old student ingested an overdose totaling 18.8-23.5 grams of valerian root. Thirty minutes after ingestion, she complained of fatigue, crampy abdominal pain, chest tightness, tremor, and lightheadedness. Vital signs were normal, with dilated pupils and a fine hand tremor. She was treated with activated charcoal and admitted to the hospital. Within 24 hours, she was symptom-free (Willey *et al.,* 1995).

There was one recent report of a possible withdrawal reaction in a man who took extremely high doses of the product-530-2000 milligrams-five times daily for many years (Garges *et al.,* 1998). After he was given the benzodiazepine, Midazolam, his condition improved. Although this patient was on multiple medications, the efficacy of the benzodiazepine in resolving many of his symptoms led to the conclusion that he was experiencing valerian withdrawal. In this connection, many clinicians, myself included, have found valerian to be a useful adjunct in treating benzodiazepine withdrawal.

Valerian does not appear to enhance the sedative effects of alcohol. (Bos *et al.,* 1997).

In summary, valerian is a useful sedative/hypnotic, without the side effects of benzodiazepines.

5. **Dosage**

The recommended dose is 50-100 milligrams taken two to three times daily and 150-300 milligrams taken 45 minutes before bedtime, using a standardized dose of 0.8% valeric acid. With prolonged use at higher doses, valerian can cause morning hangovers and headaches. I prefer prescribing it in lower doses, in combination with kava and other calming herbs.

E. ST. JOHN'S WORT *(HYPERICUM PERFORATUM)*

1. Uses

St. John's wort (SJW) is a common roadside plant that has gained increasing popularity in Europe and the United States as an effective alternative to pharmaceutical antidepressants. Research in treating patients with depression has shown that it relieves symptoms of sadness, helplessness, hopelessness, anxiety, headache, and exhaustion, all with minimal side effects. It is also useful in seasonal affective disorder and premenstrual syndrome. It has an excellent safety profile, but with some interaction caveats mentioned below. More information is needed on its long-term efficacy and safety, though it has been used by many depressed patients in Europe for years with no ill effects.

2. Research

A meta-analysis published in the *British Medical Journal* in 1996 marked the beginning of the popularity of SJW in the United States. It evaluated 23 randomized trials (20 were double-blind) of SJW in a total of 1757 outpatients with mild to moderate depression (Linde *et al,* 1996). Most trials were 4-8 weeks in duration. All groups showed improvement in depressive symptoms (usually measured by the HAM-D or CGI scales). In 15 placebo-controlled trials, SJW was found to be significantly better than placebo. In eight trials comparing SJW to tricyclic antidepressants, clinical improvement was similar, but with fewer and milder side effects. Of those on SJW, 19.8% reported side effects compared to 52.8% of those on tricyclic antidepressants.

The NIH Office of Alternative Medicine and the NIMH have recently completed a multicenter study comparing SJW to sertraline (Zoloft) and placebo in patients diagnosed with major depression. Results are pending.

3. Actions

SJW has been reported to work by enhancing the quantity of the antidepressant neurotransmitters, serotonin, norepinephrine, and dopamine *in vitro* (Miiller *et al,* 1997). In reality, though, the concentrations may be too low for these actions to be significant *in vivo.* SJW's most potent effect may be on the receptors for the inhibitory neurotransmitter, $GABA_A$ and $GABA_B$ (Cott, 1997).

SJW was well reviewed in a monograph that includes information about analytical methods for active constituents, as well as a review of the pharmacology and toxicology (Upton *et al,* 1997).

4. Adverse Effects Including St. John's Wort-Drug Interactions

SJW, like other herbal products, contains a number of pharmacologically active ingredients, some of which may potentially participate in herb-drug interactions. Other reports of interaction are only theoretical or are solely based on *in vitro* studies. The following concerns have been expressed:

1. *MAO Inhibition-the "cheese effect."* Although SJW has been reputed to have some monoamine oxidase inhibitor (MAOI) activity *in vitro,* this effect has not been demonstrated *in vivo* in either animals or humans, nor are there any reported cases of MAOI-associated hypertensive crises in individuals using SJW (Cott, 1997). Thus, there is no need to restrict tyramine-containing products such as cheese, red wine, or decongestants. Similarly, previous concerns that SJW interfered with the use of anesthesia are likely invalid.

2. Infertility. One study raised questions about possible antifertility effects of St. John's wort. When high concentrations were placed in a test tube with hamster sperm and ova, the sperm were damaged and less able to penetrate the ova. However, since it is unlikely that the actual plant extract, at this high a level of concentration, would come in contact with sperm and ova when they are in the body, the test-tube results do not translate into a meaningful concern (Ondrizek *et al,* 1999).

3. *Serotonin syndrome.* There have been a few reports of *possible* serotonin syndrome, where SJW interacted with a serotonin reuptake inhibitor (sertraline and nefazodone) resulting in symptoms of agitation, hyperthermia, diaphoresis, tachycardia, and neuromuscular disturbances, including rigidity in elderly individuals (Lantz *et al,* 1999). In view of this, the use of St. John's wort in combination with other antidepressants should be done only under medical supervision, as one would with any other antidepressant combination.

4. *Enzyme-related interactions.* The proposed mechanism of action in other purported SJW-drug interactions has been its induction of certain cytochrome (CYP) 450 enzymes, a family of enzymes concentrated in the liver and intestinal mucosa, and on P-glycoprotein (Pgp), an ATP-dependent pump that moves substrates out of cells. These can also be affected by a range of naturally occurring compounds, such as grapefruit juice and cruciferous vegetables, as well as by other drugs (Ohnishi *et al,* 2000).

The result is that SJW may reduce the efficacy of a number of drugs. These include cyclosporine (immunosuppressant for heart transplant patients) (Ruschitzka *et al,* 2000), digoxin (heart medication) (Johne *et al.,* 1999), the protease inhibitors Indivar (used in HIV/AIDS) (Piscitelli *et al,* 2000), warfarin (anticoagulant) (Maurer *et al,* 1999), theophylline (asthma), and oral contra-

ceptives. The last two merit more discussion, since they affect a larger population, but the evidence to support the claims is minimal.

a. Theophylline

Several authors have cited interaction between the asthma medication, theophylline, and SJW (Fugh-Berman & Cott, 1999). However, the published report referred to is a discussion of a single case of a 42-year-old woman, smoking half a pack of cigarettes daily (tobacco induces liver enzymes) and also taking eleven other prescription medications, who had been taking SJW for two months. On cessation of SJW, her plasma theophylline levels rose within seven days (Nebel ***et*** al., 1999). The case obviously is hard to evaluate and certainly does not constitute definite "evidence" of a SJW-theophylline interaction.

b. Oral Contraceptives

Despite popular press articles, there are as yet no reports of unwanted pregnancy caused by oral contraceptive failure due to SJW consumption. A letter to the Lancet by the Swedish Medical Products Agency reported eight cases of breakthrough bleeding in women aged 23-31 years who had been taking long-term oral contraceptives and had begun taking SJW. I have also received such reports from patients, whose symptoms cleared upon stopping the herb. The issue is unclear and may reflect a lowering of concentration of the oral contraceptive. If this is so, and unwanted pregnancy is an issue, one should err on the side of caution regarding this combination.

Lists of substrates, inducers and inhibitors of the various enzyme systems are regularly updated and can be found on the Internet at http://www.georgetown.edu/departments/pharmacology/clinlist.htm.

5. Safety

The fact is, side effects reported for SJW are generally mild, including gastrointestinal symptoms and fatigue (Linde ***et*** al., 1996). Extreme sun sensitivity or "photosensitization[7]" may also occur, especially in fair-skinned people (Cott, 2001).

Kasper and Schulz (1999) reviewed efficacy and safety from 20 controlled clinical trials, including a total of 1787 patients. They concluded that the effective dosage is 600-900 milligrams per day, of 0.3% extract, and that the risk of photosensitization is insignificant.

Animal studies show low toxicity for SJW. Rats fed SJW as 5% of their diet for 119 days experienced no adverse effects (Garrett *et* ***al.,*** 1982). In chronic toxicity studies in rats and in dogs, only nonspecific symptoms of toxicity were seen, with no effects on fertility or reproduction and no birth defects in offspring.

6. Advantages of St. John's Wort Compared to Antidepressant Drugs

- Side effects are generally mild and infrequent, as opposed to those of conventional antidepressants. These include: headaches, nausea, sexual dysfunction, insomnia, sedation, a chemical or "drugged" feeling, agitation, heart arrhythmias, weight changes, short-term memory loss, and rashes.
- St. John's wort is nonhabituating and nonaddictive, and has no withdrawal symptoms upon discontinuing use.
- SJW does not interfere with REM sleep; most often, it enhances sleep and dreaming.
- SJW shows no adverse effects when mixed with alcohol or most drugs.
- SJW is far less likely to cause drowsiness or agitation.
- There has not been a single reported death from an overdose of St. John's wort, versus one report of an annual rate of 30.1 deaths by overdose per 1 million prescriptions of antidepressant (Cass, 1999).

7. Switching from Conventional Antidepressants to St. John's Wort

Switching can be done safely in mild depression by using a withdrawal protocol appropriate to the specific drug and adding in one 300 mg dose of SJW each time the drug dose is lowered, usually every few days. By the end of 1–4 weeks, the patient can discontinue the antidepressant completely. For details, see Cass, (1997, pp. 169-170). In more serious depression, maintain the antidepressant at half strength for a month while increasing the St. John's wort to full dose, then re-evaluate. Taper off the medication as the full antidepressant effect of the herb takes effect.

This protocol is generally well tolerated. No reports have been published of *serotonin syndrome* or any other significant adverse effects using these combinations. While there is no evidence of danger, we recommend the same caution in changing from an MAOI to St. John's wort as with other antidepressants. Conservatively, one should observe a 2-4 week washout period between stopping the drug and starting the herb.

There are those who do best remaining on a low dose of antidepressant in combination with SJW. The latter can potentiate the drug, and the lower dose

has fewer drug side effects. For details on this use, see Dr. Norman Rosenthal's excellent book on SJW, *St. John's Wort: The Herbal Way to Feeling Good* (1998).

8. Combinations

St John's wort combines well with other herbs and nutrients, such as kava and ginkgo. While SJW may take as long as 2-6 weeks to reach its full effect, kava's rapid onset can be a useful addition, acting immediately on any anxiety or insomnia component. In the elderly, ginkgo is an especially useful adjunct.

9. Dosage

The recommended dose of St. John's wort is 300 milligrams three times a day of a standardized extract of 0.3% hypericin, for a total of 900 milligrams daily. Higher doses of 1200-1800 milligrams have been used successfully in more seriously depressed patients, with no increase in side effects (Vorbach *et* al., 1997). If there is any gastrointestinal discomfort from the herb, it can be taken with food.

The 900 milligrams can also be taken as 450 milligrams twice a day, or all at once, in the morning for those who find it stimulating (to keep it from interfering with sleep) or in the evening for those who find it to be sedating. In my own practice, I have seen a small percentage of patients who become anxious on SJW. They should lower their dose, or discontinue the herb altogether, then switch to other natural antidepressant supplements, including specific amino acids and essential fatty acids.

Many patients report positive effects almost immediately, with a sensation of "a weight being lifted," decreased anxiety, and an enhanced ability to concentrate. As with most antidepressants, though, it may take three or four weeks before one notices significant effects.

There are generally no withdrawal effects from St. John's wort, so one can stop and restart as needed. After a few months, rather than stopping all at once, it is a good idea to taper off gradually in order to assess continued need and dose level.

As stated earlier, SJW remains a safe, effective alternative to prescription antidepressants, with the appropriate cautions.

As already mentioned, this is by no means a comprehensive list of herbs for mind and mood. Also, for a context in using all of these, combined with a variety of other supplements (amino acids, essential fatty acids, vitamins, and

minerals), you are invited to read my books (on SJW, kava and other supplements for anxiety and depression) listed in the resources.

VII. GENERAL GUIDELINES FOR THE USE OF HERBAL MEDICINES

- The clinician should take a careful history of the patient's use of herbs and other supplements.
- An accurate medical diagnosis must be made before using herbs for symptomatic treatment.
- " Natural is not necessarily ***safe:*** Attention should be paid to quality of product, dosage, and potential adverse effects, including interactions.
- Herbal treatments should, for the most part, be avoided in pregnancy (and contemplated pregnancy) and lactation.
- Herbal usage in children should be done with care, using the appropriate dosage based on weight.
- Adverse effects should be recorded, and dosage reduced, or the product discontinued. It can be carefully restarted to ascertain whether or not it is the source of the problem.

VIII. THE FUTURE OF HERBS IN MEDICAL PRACTICE

We are at the threshold of great changes in the practice of medicine, with a shift to increasing self-care with more benign, less invasive treatments. As such, it is critical that practicing clinicians (and, in turn, patients) be made aware of the indications, actions, and drug interactions of herbal remedies.

IX. RESOURCES

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B. WEB SITES

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American Herbal Products Association: www.AHPA.org.
Herb Research Foundation: www.herbs.org
Hyla Cass, MD: www.cassmd.com
Natural Product Research Consultants (NPRC): www.nprc.com
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Chapter 19

Homeopathy

Philip Bailey, MD

Handbook of Complementary and Alternative Therapies in Mental Health

I. OVERVIEW

A 40-year old woman suddenly entered a profound depression during the course of psychotherapy. She became withdrawn, agitated, and confused and said that she felt she was in a deep hole where there was no light and no hope. She stared at me with eyes full of fear and said that suicide seemed the only option. I knew I would have to move quickly if we were to avoid a hospital admission, and I also knew she would not take antidepressants. I gave her a high potency of the homeopathic remedy Aurum, made from gold. The next day she was no better, appearing tortured and haunted by invisible ghosts. I reassessed her case and gave a single dose of the remedy Helleborus, a homeopathic medicine used infrequently, principally for extreme mental states. The next day her depression was gone and she was back to her normal self. She said that her mind started to clear within an hour of taking the remedy, and within **3** hours her mood was beginning to lift. She needed no repetition of the remedy.

This case may sound miraculous to some, but responses such as these are a common occurrence in homeopathic practice. This case illustrates three important points about homeopathic treatment. First of all, it shows that homeopathic treatment is not just a placebo response. If anything, the patient would have had more faith in the first treatment than the second, yet the first did nothing. (The fact that homeopathic medicines are effective in the treatment of animals and small children also confirms this point.) Second, it shows how specific homeopathic treatment is. The two remedies Aurum and Helleborus have a lot in common in terms of their clinical indications, yet one remedy had no effect and the other was curative. Homeopathy seems to work via resonance between energy in the remedy and some kind of energy in the patient's body. An exact match is generally required for the remedy to be effective, which makes homeopathy challenging to practice. A physician could choose between about 30 antidepressants in this case, most or all of which would have shown some positive effect, though not quickly enough to have avoided a hospital admission. A homeopathic physician must find the one remedy that matches the patient's symptoms exactly, out of a choice of hundreds.

The third point illustrated by this case is the positive side of this specificity, namely that homeopathic medicines are extraordinarily effective, when correctly selected, in treating both physical and psychological illnesses. Whereas an antidepressant will mask the symptoms of depression, the correct homeopathic remedy in time actually removes the tendency to depression. It also alleviates symptoms rapidly and increases the physical well-being of the patient.

A. ORIGINS OF HOMEOPATHY

1. Samuel Hahnemann

Homeopathy is based on the principle that like can cure like. More specifically, if a substance can produce symptoms in a healthy person, that substance can cure these same symptoms in a sick person. Although the homeopathic principle has been around for a very long time, it was not until 200 years ago that is was used to develop a systematic body of medicine.

In 1790 the German physician Samuel Hahnemann rediscovered the homeopathic principle that like can cure like. Hahnemann was a brilliant and eccentric man who was learned in philosophy and spoke seven languages fluently, including Latin and English. He became disillusioned with the medical practices of his day, since they were often more deadly than the diseases they were treating. So he gave up the practice of medicine and made a living translating medical texts. Being both brilliant and pig-headed, he would often add copious footnotes to the texts he was translating, expanding on the subject and often disagreeing with the author. One day he was translating a *materia medica* by the Scottish physician Cullen when he came across an assertion he objected to. Cullen had stated that Peruvian bark was effective in the treatment of malaria because it tasted so bitter (we now know that it contains quinine). This made no sense to Hahnemann, since he knew of other very bitter substances that had no effect on malaria. This time, however, his curiosity was pricked. Instead of just writing a footnote to Cullen's text, he decided to take some Peruvian bark himself to see what it did. To his surprise he found that it produced in him fever alternating with chills, the very same symptoms it cured in malarial patients. A less curious doctor might have put this down to coincidence, but Hahnemann thought there might be more to it than that. Could it be, he thought, that the bark can cure malaria because it is in some way similar to the disease?

Being of thorough scientific bent, he set about a series of experiments to test his hypothesis. He gave various test substances (mainly plant extracts or simple minerals) to himself and his long-suffering family and friends, and then recorded every symptom, both mental and physical, that they seemed to produce. When three or more subjects recorded the same symptom from a given substance, he would record it as part of the "symptom picture" of that substance. In this way he built up detailed symptom pictures of many plant and mineral substances. When he came across a patient whose symptoms matched one of these symptom pictures, he would give the patient the relevant substance, and sure enough the patient would usually get better. In this way Hahnemann confirmed the homeopathic principle and also developed a systematic knowledge of the medicinal effects of hundreds of simple substances, some of which were already in use therapeutically, many of which were not.

It is to Hahnemann's credit that over 200 years ago he intuitively knew that it was important to record psychological symptoms in his "provings," as his experiments came to be called, and that he gave them equal importance to physical symptoms. In time he came to give psychological symptoms even more importance than physical ones in determining which remedy fits the whole person.

2. Spread of Homeopathy

a. Europe

Hahnemann pitted himself against the medical establishment of his day by roundly denouncing their dangerous and generally ineffective practices. He taught his system of medicine at the University of Leipzig from 1811-1820, during which time he both alienated a good many doctors and attracted many followers, who became homeopathic physicians. Many doctors were converted during the Asiatic cholera epidemic of 1831, which spread throughout Europe. Hahnemann discovered that the homeopathic remedy made from camphor was effective against this epidemic and was highly successful in treating the disease. He wrote several dissertations on the subject, which he tried to get published, giving instructions as to how to cure the illness; but such was the antagonism of the medical authorities to him that he was forbidden from publishing them. Interestingly, Hahnemann's dissertations on cholera show clearly that he anticipated the germ theory of disease by about 30 years. When Louis Pasteur was a mere 9 years old, Hahnemann wrote that the contagion of cholera was due to a "brood of excessively small invisible living creatures[7]" that were "transferred invisibly from man to man." During the 1831 epidemic, official figures revealed that the death rate of the disease in the hands of orthodox physicians was about 85%. The death rate in Germany of cholera patients in the hands of homeopathic physicians was just 4%.

Despite the opposition of orthodox doctors, who felt threatened by the successes of homeopathy, its practice spread rapidly throughout Europe. During the nineteenth century, three homeopathic hospitals were established in Germany, five in Austria, three in France, and six in the United Kingdom.

In 1835, after the death of his first wife, Hahnemann married a French woman, Marie, and moved to Paris. Here some of the members of the French Academy of Medicine attempted to have Hahnemann barred from practicing. However, the minister for Public Health announced that if homeopathy was baseless, it would soon decline, whereas if it were sound, it would flourish despite any ban. Homeopathy did flourish while Hahnemann was in Paris, where he taught and practiced until his death in 1843.

Wherever homeopathy thrived it was fought with vigor by orthodox doctors. In 1854 an epidemic of Asiatic cholera spread through London. The

death rate in the London Homeopathic Hospital among cholera patients was 16%. In the orthodox hospitals it was 52%. When these results were presented to Parliament the homeopathic results were omitted, which led one member of Parliament who was a homeopath to object. Eventually the homeopathic results were presented to Parliament in a separate book, so as not to embarrass the orthodox hospitals.

b. The United States

The first American doctor to take up homeopathy was Dr. Hans Gram. Since he was the president of the Medical and Philosophical Society of New York (what a pity these two disciplines are no longer so closely associated), he soon attracted more converts, especially among German-speaking doctors. The American Institute of Homeopathy was founded in 1844, principally to regulate the training and qualifications of homeopathic physicians, who were by this time already more popular and more profitable than their orthodox colleagues. This prompted the orthodox doctors to found their own organization, the American Medical Association, which was established 2 years later in 1846. The rivalry between these two organizations was intense, with the homeopathic doctors in the ascendancy until about 1910. In 1900 there were about 15,000 homeopathic doctors in the United States, 112 homeopathic hospitals, and 22 homeopathic medical schools. According to Harald Gaier, author of *Thorson's Encyclopaedic Dictionary of Homeopathy,* homeopathy became far more dominant in the United States than in Europe because it was slow to develop orthodox medical organizations, the very organizations that tended to thwart the spread of homeopathy.

B. THE DECLINE AND RISE OF HOMEOPATHY

L **The Decline**

If homeopathy was the dominant medical system in the United States at the turn of the century, what happened? There are several reasons for the rapid decline in homeopathic practice over the next 50 years. Probably the greatest influence was the combined effect of the new molecular theory and the emerging science of pharmacology. These two disciplines fit together and did not fit in with homeopathy, where solutions containing no molecules of the original substance were used. With the advent of effective pharmaceuticals, the relationship between orthodox doctors and drug manufacturers became much closer and this gave orthodox medicine a great influx of financial support for research, finance denied to homeopathic doctors. Also, the

new scientific thinking caught on fast. It implied that everything could be understood on the molecular level, and this seemed to be confirmed by rapid and reliable results from the new drugs. In contrast, homeopathic prescribing was difficult and its mechanism of action very obscure. The more impressive the new drugs became (particularly the new sulfonamide antibiotics), the more powerful the orthodox medical system grew, until it was effectively able to suppress the practice of homeopathy by political and economic means. State medical boards, which previously had contained a mixture of homeopathic and allopathic (orthodox) physicians, became purely allopathic, and forbade doctors from practicing homeopathy. Public funds were withdrawn from homeopathic hospitals, and advertising laws greatly favored the orthodox practitioners. The result was that by 1935 all of the homeopathic medical schools had closed, and all of the homeopathic hospitals had either closed or converted to orthodox practice. A few physicians continued to practice homeopathy, but in the main the practice was taken over by nonmedical homeopaths, who now outnumber homeopathic doctors around the world by a factor of 20 or more.

The decline in homeopathy in the United States was mirrored around the world. It was not until the 1960s that homeopathy began to grow again into a popular medical alternative.

2. The Resurgence of Homeopathy

Practitioners from around the world continued to refine and expand homeopathic knowledge during the quiet decades from the 1920s to the 1960s. The collective change in gestalt that occurred in the 1960s benefited many holistic treatment methods, including homeopathy. By 1960 it was apparent to many that the reductionist scientific approach, while efficient in producing technology and new drugs, had its limitations. People began to realize that chemical fertilizers degraded the soil, which in turn produced less nutritious crops, and also that chemical drugs had a tendency to create imbalance in the body. They began to turn in increasing numbers to homeopathic treatment, in order to restore balance to both body and mind. This time Europe not only led the way, but established itself as the dominant center of world homeopathy. During the first half of the twentieth century as doctors abandoned the practice of homeopathy in the United States, many were able to continue in Europe. In Britain, where the aristocracy and the royal family had patronized homeopaths ever since the middle of the nineteenth century, the tradition of medical homeopathy was protected by the establishment, particularly by the Faculty of Homeopathy, based at the Royal London Homeopathic Hospital in Great Ormond Street. Furthermore, in Britain and many other European countries, nonmedical

homeopaths had not been aggressively opposed by the medical establishment and had built up strong national organizations, which were able to quickly take advantage of the upturn in public interest in the 1960s and 1970s.

As public demand for homeopathy grew, several European countries incorporated homeopathy into their national health services. In Great Britain it was incorporated into the National Health Service from its inception in 1947, and the London, Glasgow, and Bristol Homeopathic Hospitals, which had survived the lean years, became part of the public health system, as they are to this day.

Throughout the world, doctors began learning homeopathy in ever-increasing numbers from the 1960s onward. In France the support of homeopathic pharmaceutical companies has enabled much scientific research to be undertaken into homeopathic medicines and their use, and the official French pharmacopoeia lists homeopathic medicines on an equal basis with allopathic drugs. Today citizens in most European countries have access to medically trained homeopaths, as well as thoroughly trained nonmedical homeopaths. Furthermore, in some countries, like France and Holland, about one-third of doctors now use homeopathic medicines to some extent.

In the United States the resurgence of homeopathy has been a little slower, in part due to the stringent laws restricting its practice. Not only must homeopaths be either medical doctors or doctor's assistants (though this is often bypassed), but in some states doctors can be deregistered for practicing homeopathy. Nevertheless, homeopathic practitioners are now trained at numerous colleges throughout the United States and South America and are available in every large city.

C. HOMEOPATHIC PHILOSOPHY

1. The Vital Force

Hahnemann developed a profound and detailed theory to explain and guide the practice of homeopathy. It is contained principally in his major philosophic work, ***The*** *Organon,* and also in his two-volume treatise ***Chronic Diseases.*** While homeopaths have added and refined some elements of homeopathic philosophy over the centuries, it is essentially all to be found in Hahnemann's original writings.

Hahnemann saw the body and the mind to be expressions of life energy, which he simply called the vital force. The vital force as he saw it combines the spiritual aspect of man, the soul, and the more physical energy in the body, which Hindus call prana and Taoists call chi. Hahnemann attributed intelligence to the vital force, since it is the organizing principle of the body

and the mind. The vital force not only maintains the equilibrium or homeostasis of body physiology, but also automatically corrects disequilibrium and hence promotes healing. It is when the vital force is weakened that the body can no longer heal itself, and medicines are required.

One of Hahnemann's unique and visionary contributions to science was the assertion that all substances contain a vital force. This was confirmed over a century later when Einstein proclaimed that matter and energy are interchangeable. It is now common knowledge that all matter is a form of (apparently) solidified energy and can be converted to pure energy. Furthermore, the manner in which different elements and compounds discharge excess energy is highly specific, depending on the configuration of their subatomic particles, as can be seen in spectronomy, where elements in outer space can be identified by the pattern of light that they discharge. Hahnemann taught that each substance in nature has its own highly specific vital force (or energy) and that by choosing the correct substance as a medicine, the homeopath can augment the vital force of the patient. It is now assumed that homeopathic medicines work by resonance between the energy in the medicinal solution and the "body energy" of the patient. This accounts for the fact that generally one homeopathic remedy will have a profound healing effect on the patient, while the other hundreds of homeopathic remedies will usually have no effect. This can be compared to the effect of bringing a vibrating tuning fork close to a guitar string. Only forks of the correct frequency can make the string vibrate, and these must have either the same frequency of vibration as the string, or one of a related harmonic.

Hahnemann postulated that external stresses alter the vital force of the patient and that illness symptoms are an attempt by the vital force to reestablish the original state of harmony within itself. Today we would say that external stresses alter the frequency (and the strength) of the vital force and that symptoms are part of the body's attempt to return to the original healthy frequency. This explains why homeopaths are not in favor of suppressing symptoms, as one does by giving an aspirin or a cortisone injection (or an antidepressant). Since disease symptoms are seen as a means that the vital force uses to try to reestablish equilibrium in the body, going against nature by suppressing symptoms can make matters worse. Homeopaths have long observed that suppressing a superficial symptom, such as eczema, using a chemical drug can drive the imbalance deeper, producing a more serious condition, such as asthma. Furthermore, the reverse is observed during homeopathic treatment. As serious or more internal symptoms improve, there is sometimes an aggravation of more superficial symptoms. Interestingly, this same direction of cure has been noted by practitioners of other vibrational medicines, such as traditional Chinese medicine and even spiritual healing.

One of the first things that the patient usually notices when starting to take the correct homeopathic medicine is that energy increases. This is seen as a direct strengthening of the vital force by the energy contained in the remedy. The other early sign of progress is an improvement in mood (even when the presenting symptom is physical). Hahnemann was a meticulous observer, and he noticed these changes in his patients. He stated that when the vital force is strengthened by the correct remedy, the effect will first be seen on the higher levels of the vital force, namely the mind and emotions, next on the energy of the body, and finally on the physical symptoms. He further explained that the vital force is inherently intelligent, and that when given the energy it requires to grow stronger, it first restores balance to itself at its highest levels before balancing out the imbalances at the more physical level. This is rather like treating the general of a stricken army first, who can then help coordinate the treatment of all the ranks.

2. The Law of Similars

Hahnemann stated that the more similar the disease is to the symptoms produced by the medicine in healthy people, the greater will be the medicine's curative effect. In practice, homeopaths know that while one remedy will have a broad and beneficial effect on the whole patient, remedies with similar symptom pictures can have a lesser, beneficial effect. This is presumed to be due to the similarity between the frequency of energy in the correct remedy and that in close remedies. This could be comparable to a tuning fork of 144 Hertz which could set in motion a string tensioned to the note A. Tuning forks of 140 and 147 Hertz could also produce some movement in the string, but not as much.

D. THEORIES OF HOMEOPATHIC ACTION

The original theory of how homeopathy worked was Hahnemann's. He said that the correct remedy presented the body's vital force with a very mild form of the disease. Whereas the disease itself was so strong that it overwhelmed the ability of the vital force to correct it, the "medicinal disease" induced by the remedy was so gentle that the vital force was able to mount a response that corrected the imbalance induced by the remedy. Since the imbalance produced by the disease is so similar to that produced by the remedy, the healing direction (or retuning of the vital force) stimulated by the remedy will also help correct the disease itself. This is very similar to the principle of vaccination. A tiny amount of the disease will stimulate a protective response by the body's defenses. The main difference is that the homeopathic remedy is a vibration of

energy rather than a disease product, and also it is effective not only in preventing infectious diseases but also in curing noninfectious ones.

A more modem theory of action of homeopathic medicines was proposed by the great contemporary master of homeopathy, George Vithoulkas. In his book *The Science of Homeopathy,* he proposed that the correct homeopathic remedy contains energy at the same frequency (or at a related harmonic) as the patient's vital force. Furthermore, he proposed that the vital force of the patient changes frequency when the patient becomes sick. Upon taking the remedy, resonance occurs, that is, the patient's vital force is strengthened (still at the unhealthy frequency). This phase corresponds to the aggravation of symptoms that sometimes occurs shortly after the correct remedy is taken. Vithoulkas suggested that the aggravation is due to the vital force being strengthened while still resonating to the unhealthy frequency. Shortly after the aggravation, the patient's condition begins to improve. Vithoulkas suggested that this phase corresponds to a retuning of the vital force to a healthy frequency. He postulated that once strengthened, the patient's vital force automatically retunes itself to a healthier frequency. In other words, the body is self-healing providing that energy can be given at a frequency compatible with the patient's own energy.

At present these are only theories, since we cannot measure the vital force of the patient or of the remedy, just as we cannot measure emotional energy, which is a relatively high octave of the vital force.

E. POTENTIATION

Homeopathic medicines are mostly very dilute, often so dilute that no molecules of the original substance are left. This single fact accounts for much of the disbelief expressed by the medical profession regarding homeopathy. However, if one remembers that the medicine is a frequency of energy contained in the solution, then it is more feasible that this energy can remain after the molecules of the base substance have been removed. After all, i f we irradiate water with gamma rays, then it will contain new energy, but no new molecules. The gamma rays did originate from molecules, but were released from them during the emission of radioactivity. Similarly, the medicinal energy of the dilute homeopathic remedy originated in molecules that it no longer contains.

It is not clear how Hahnemann happened upon the process of homeopathic potentization of medicines. It is thought that he began to dilute some of his medicines because they were toxic in their crude form. Initially he found there was no loss of efficacy in the diluted medicines, and side effects could be avoided. He then noticed that the diluted medicines actually worked more strongly in a curative direction. He proposed that the vital force of the diluted

medicine was more subtle, and hence more able to affect the finer forms of the patient's vital force, especially the physical energy and the mental level. Finally, he discovered that he could make remedies more and more powerful in their curative properties by a series of successive dilutions, provided each dilution was followed by vigorous shaking (known as succussion). Thus a 10c potency is made by performing ten separate dilutions of 1 in 100, with 1 minute of shaking between each dilution.

Any homeopath who knows the art (that is, who knows how to match the remedy with the patient) recognizes that the more dilute potencies are far more powerful than the cruder potencies. For example, in the case of the depressed patient to whom I gave the remedy Helleborus, the potency I gave was 1000c (or 1M for short). In other words, the original plant extract of hellebore had undergone 1000 separate dilutions of 1 in 100. After only 12 dilutions, no molecules were left in solution of the original extract. Yet I can confirm from long experience that relatively undiluted potencies of Helleborus, such as 9c, would have had a negligible effect on my patient. The higher the potency (dilution), the more effect it has on the mental and emotional symptoms. A single dose of 1M of the correct remedy can help improve psychological symptoms for several months.

Lower potencies are useful for treating physical complaints, and LM potencies are good at treating both physical and psychological symptoms. (LM potencies are prepared by successive dilutions of 1 in 50,000. They combine the gentleness of the lower potencies with the depth of the higher ones. Toward the end of his life, Hahnemann used only LM potencies.)

F. CONSTITUTIONAL TREATMENT

Even during the early years of Hahnemann's homeopathic practice he noticed that people of certain temperaments were more likely than others to respond to certain remedies. In part this coincided with the mental symptoms already ascertained during the proving of the remedy, but the mental characteristics of patients requiring the remedy were soon expanded by clinical experience. Hahnemann noted, for example, that the remedy Nux Vomica tended to be needed more often in men who were prone to anger and to overextending themselves. This mental picture was later fleshed out by subsequent homeopaths into a full psychological profile of the character whose vital force tends to have a long-term correspondence with the remedy. We can deduce this because individuals who fit the psychological profile of Nux Vomica tend to come back with both mental and physical symptoms contained in the Nux proving year after year, and each episode of "Nux symptoms" will respond

well to the remedy. This development of psychological profiles that correspond with homeopathic remedies led to a divergence of style in homeopathic practice. Some homeopaths began prescribing more and more on the basis of the long-term constitution of the patient, and concentrating a great deal on the patient's personality in order to select the constitutional remedy. Others concentrated on the current symptoms, with little regard for long-term constitutional features. Having said that, most homeopaths combine both modes of prescribing to some extent. For example, in my own practice I tend to treat chronic conditions with a long-term constitutional remedy that fits the personality of the patient, as well as the long-term physical characteristics, including physical appearance, past medical history, family history, and reactions to heat and cold. However, I sometimes find that the current symptoms do not fit the profile of the long-term constitutional remedy, in which case I will give another remedy that fits better. This could be termed a short-term constitutional remedy, "constitutional" because it still fits the whole of the patient at the moment they consulted me.

In my own experience, one of the beauties of constitutional prescribing is that the patient is given a remedy that they can resort to from time to time to tune up their physical and emotional health. Providing that they respond well initially to the remedy, they can return to this remedy in the future if they feel run down or are experiencing a lot a stress, and it will usually still be effective in harmonizing their vital force. (Of course, if new symptoms arise, they need to check with their homeopath to see whether or not they need a new remedy).

II. APPLICABILITY OF HOMEOPATHY TO THE TREATMENT OF PSYCHOLOGICAL DISORDERS

A. OVERVIEW

Ever since Hahnemann discovered how to use substances homeopathically, they have been used to treat psychological illness. As a result, there is now a very rich store of homeopathic remedies with known psychological applications and indications. These cover the whole gamut of psychological symptoms, from pre-exam nerves to schizophrenia. In the right hands they are both effective and safe. In the wrong hands they are ineffective (when the wrong remedy is given) but rarely dangerous.

Homeopathic medicines work by retuning physical, emotional, and mental energy. This may sound rather vague or ethereal, and it is very hard to prove, but the results of homeopathic treatment by a skilled practitioner are anything but vague, as the case at the beginning of the chapter illustrates.

The majority of psychological disorders can be adequately treated with homeopathy, rendering orthodox drug treatment unnecessary. Even major psychosis responds to the correct remedy in high potency, though not always quickly enough to avoid drug medication or hospitalization. As with drug treatment, the response depends on the severity of the illness. Chronic schizophrenia will not respond as totally as intermittent psychosis, and mild degrees of psychosis will clear up rapidly with homeopathic treatment.

One advantage of homeopathic treatment is that there are generally no side effects. On the contrary, the patient's general health and well-being is usually improved. Another is that homeopathy does more than just control symptoms. It actually restores health. Thus, a patient who has been prone to recurrent depression for 20 years can cease to be prone to depression after about a year of homeopathic treatment. Furthermore, depressive symptoms will respond within a day or two in most cases to high potencies, unlike conventional antidepressives, which take up to 2 weeks to relieve symptoms. The same can be said for treatment of anxiety and anger problems. Bipolar affective disorder is also amenable to homeopathic treatment. Even early degrees of dementia respond well. I have an elderly female patient with early Alzheimer's disease who came to see if I could help with her muzzy head, her poor memory, and general malaise. Within 3 weeks of taking the remedy Baryta Muriaticum, all three of these symptoms had significantly improved, and her caregiver confirmed that she was brighter and more coherent. The improvement has now continued for 8 months, with the patient taking a daily dose of the remedy plus occasional "boosters"of a higher potency.

In my early years of homeopathic practice I had little success treating patients who were already taking antidepressants or major tranquillizers. It seemed that the drugs interfered with the homeopathic medicines. However, since using the LM potencies, which are given daily, I have found that the remedies will work alongside these drugs, without any interference either way. Thus a patient whose depression is controlled on an antidepressant, but who still experiences little joy in life and still suffers from some anxiety, can improve further by taking a homeopathic remedy as well. Often it is possible to reduce and then stop other psychiatric medications once the homeopathic remedy is seen to be working.

Another advantage of homeopathic treatment of psychological disorders is that they are highly specific and can help disorders that usually respond poorly to drug treatment, such as personality disorders. In particular, I have found homeopathic treatment to be effective in reducing the histrionic behavior of borderline personality disorders and helping to stabilize the mood in these cases. A homeopath has about 20 remedies available to treat hysterical and histrionic cases. Of these, 19 will usually have little or no effect, but the correct remedy will usually bring about significant change in the direction of integration and

stabilization of the personality. Such cases are demanding because there is a lot of overlap of prescribing symptoms between each of these remedies. The skilled homeopath will home in on individualizing features of the case that help to determine the best remedy. Physical symptoms and past medical history will help the homeopath to differentiate between the remedies, as will general symptoms like sensitivity to heat and cold and also food cravings.

B. INTEGRATION AND INDIVIDUATION

One important question when considering the treatment of psychological problems with medicines is the relationship between the medicinal effect and psychological healing processes. For example, some patients decide to cease taking antidepressants, because they experience so much numbing of emotions that they cannot make progress in psychotherapy. All psychiatric medicines control symptoms, but many also suppress emotions and some also reduce clarity of thought. Homeopathic remedies generally support rather than oppose psychological healing processes. As an example, it is well known that psychological trauma will often lay buried until the patient feels sufficiently safe to recall the emotions associated with it. This may occur when the patient finally enters a supportive relationship or finally leaves an abusive one. Then the patient will begin to experience the grief, the terror, or the rage that was suppressed many years before. Provided this occurs as described in the setting of increased psychological safety, such catharsis often aids emotional healing, since holding onto the emotions frequently produces tension, anxiety, or depression. It is well recognized by homeopaths that constitutional treatment frequently stimulates such healing catharsis. The patient returns feeling stronger and more confident, despite the feelings of grief or bouts of old fear. Usually the patient also remembers the source of the emotions and knows that something positive is happening. It appears that a kind of internal safety is produced by strengthening the vital force of the patient, which permits difficult emotions to be faced and worked through.

There are other indications that homeopathic treatment facilitates psychological integration and emotional maturity. It is quite common in homeopathic practice for a patient to leave an abusive relationship or stand up to a domineering family member for the first time shortly after taking a constitutional remedy. Similarly, patients often decide to enter therapy after starting homeopathic treatment, or ask their spouse to seek counseling with them. In these cases, they are no longer willing to put up with the psychological restrictions that have limited their creativity for years. Homeopathic treatment can give a person the strength to overcome chronic psychological defenses that are restricting growth.

It does this not by blasting through defenses, but rather by preparing the ground for a natural dismantling of defenses as they are felt to be no longer necessary.

In addition to the general psychological strengthening that follows all constitutional treatment, there are specific homeopathic remedies that can remove psychological morbidity caused by specific traumas. For example, the remedy Natmm Sulphuricum can reverse the cognitive and emotional disturbances that follow head injuries, even when taken years after the injury. This implies that head injuries tend to induce a specific energetic imbalance in the vital force, which is amenable to treatment. Natrum Muriaticum and Ignatia are remedies that can heal the psychological damage caused by unfinished grieving. A great many homeopaths have had the experience of giving these remedies to people who have become emotionally closed following the loss of a loved one and finding that the patient becomes able to risk intimacy again. Ignatia is also useful for treatment of acute grief. It centers the patients, brings them back into their bodies, and eases the emotional pain. Staphysagria is useful for allowing suppressed anger to surface and dissipate. It is especially useful in cases of previous sexual abuse, where it helps to increase assertiveness as well as improve mood. These remedies and many more act as unblocking agents that allow the patient to move forward again after months or years of arrested development.

In conclusion, it would be fair to say that homeopathy has an enormous amount to offer in the treatment of psychological disorders. Its principal limitations are external, namely level of public awareness and availability of skilled practitioners.

III. SAFETY, COMPATIBILITY, AND CONTRAINDICATIONS

A. SAFETY OF HOMEOPATHY

1. Safety of Homeopathic Medicines

Homeopathic medicines are generally very safe to use, provided certain guidelines are followed. They are certainly far safer in general than orthodox drugs and also safer than most herbal medicines. This is because they are so dilute. In most homeopathic medicines there are no molecules of the original substance, only an energetic trace, which is contained in water and alcohol or on sugar pills. Even in the lower potencies where some physical amount remains, it is too dilute to do harm. Some remedies that are poisonous in their crude form, such as arsenic and certain snake venoms, are not permitted to be sold at concentrations where they could be toxic and are only available at

higher dilutions. Because of the dilute nature of homeopathic medicines, there is generally no concern if a child swallows a whole bottle of either a low or a high dilution. Furthermore, because the remedies work through the principle of resonance, they usually have no effect when they are not needed.

2. Safety of Homeopathic Treatment

a. Proving the Remedy

Although homeopathic medicines are generally very safe, they should be treated with respect as medicines and not placebos. Because they can have a powerful energetic effect on the body, they can sometimes induce side effects when used incorrectly. **A** few doses of a low potency (a more concentrated remedy) will do no harm even if it is not needed by the patient. However, if a remedy that is not indicated is taken for a prolonged period, it can actually induce the symptoms characteristic of the remedy. In other words, a proving takes place. These symptoms can be either physical or psychological. Generally these symptoms will subside quickly once the remedy is stopped, but occasionally they must be antidoted with another remedy.

Second, high potencies, as their name suggests, are more powerful than low potencies, and just one dose can produce side effects if the remedy is not indicated. Again, these side effects are usually short lived. However, if the patient has a serious physical or mental illness, it can be aggravated for some time by an incorrect remedy, whether a low potency taken for a prolonged period or a single dose of a high potency. Thus, it is essential that homeopaths receive thorough training. Generally, a homeopath should not give a high potency unless he or she is sure it is the correct remedy.

Side effects are most likely to occur when a remedy is given that is similar to the correct remedy. This is thought to be because a partial resonance takes place, which disturbs the vital force without strengthening it.

b. Aggravations

Even the correct remedy can produce a temporary aggravation of existing symptoms before the improvement sets in. This can be seen as due to a strengthening of the vital force at the diseased frequency before retuning to a healthier frequency. This "therapeutic aggravation[7]' can be minimized or avoided altogether by choosing the appropriate potency. In inflammatory conditions such as rheumatoid arthritis, only low potencies are safe for this reason. Patients who have serious psychological symptoms in addition to inflamma-

tory conditions should be treated with low LM potencies, since these are deep enough to help the mind, but gentle enough to avoid aggravations.

Occasionally aggravations of symptoms last a long time, generally when the patient was given too high a potency. They can be ameliorated by antidoting with other remedies, by antidoting with camphor or coffee, or by taking symptomatic orthodox medications.

B. COMPATIBILITY WITH CONVENTIONAL CARE

Homeopathic treatment is completely compatible with all forms of conventional care. Occasionally, orthodox medicines will reduce the effectiveness of homeopathic medicines, particularly major tranquilizers and high-dose corticosteroids. However, homeopathic medicines will not reduce the effectiveness of drugs. One note of caution involves treating people for deficiencies of insulin or thyroxine. Successful treatment can increase these natural hormones, in which case the orthodox replacement must be reduced to avoid toxicity from excess hormone.

Homeopathic medicine is useful in conjunction with psychotherapy, since it increases ego strength and facilitates the processing of trauma. Generally one can reduce the duration of psychotherapy considerably by adding homeopathic treatment.

C. CONTRAINDICATIONS TO HOMEOPATHIC TREATMENT

There are no contraindications to homeopathic treatment.

IV. RESEARCH INTO HOMEOPATHIC TREATMENT

As of now, no research has been able to prove how homeopathic remedies work or to measure the energy contained in them. However, there have been hundreds of clinical trials of homeopathic treatments, the majority of which have shown positive effects.

One difficulty in conducting trials of homeopathic treatment for a specific condition is that the remedy must be individually chosen to fit the patient, thus one cannot give the same remedy to every patient in the trial. This means that clinical trials of homeopathic treatment measure the effectiveness of the method as a whole, rather than of particular remedies. It also means that trials measure the skill of the prescriber far more than do trials of orthodox medicines, where

only one medication is being tested. If a trial as a whole shows no effect for homeopathic treatment, this could mean homeopathy is ineffective in this condition or, more likely, that the prescriber failed to choose the correct remedies, those that fit the patient's symptoms most closely.

Despite the difficulties mentioned, more than 200 placebo-controlled trials have been conducted in recent years on the homeopathic treatment of a wide variety of conditions. Many have been double-blind trials. The results of most of these trials have been summarized in two papers published in scientific journals. The first was a meta-analysis of 107 trials commissioned by the Dutch government in 1990 in order to decide whether or not to include homeopathy in the Dutch National Health Service (Kleijnen, Knipschild, Riet, 1991). Of these trials, 77% showed a positive result for homeopathic treatment compared with placebo. Only 22 of these trials fit all the authors' criteria for rigorous double-blind trials, and of these 22, 15 showed positive results for homeopathic treatment. The authors concluded that the evidence of these trials would probably be sufficient for establishing homeopathy as an effective method of treatment for the conditions studied, if *the mechanism of homeopathy were understood.* Despite these reservations, the Dutch government has now included homeopathy as part of the health service.

The second meta-analysis published reviewed 186 trials, 89 of which fit the authors' predefined criteria The conclusion of the analysis was that homeopathic treatment was 2.45 times more likely to produce therapeutic results than placebo. (Linden, Clausius, & Ramirez, 1997).

A recent trial by Lamont published in the *British Homeopathic Journal* (which caters to medically qualified homeopaths) investigated the homeopathic treatment of attention deficit hyperactivity disorder (ADHD), and found homeopathy significantly more effective than placebo. (Lamont, 1997).

V. TREATMENT APPROACHES FOR DEPRESSION, ANXIETY, ADHD, AND ADDICTIONS

A, COMMON TREATMENT APPROACHES FOR DEPRESSION

Depression generally responds well to constitutional treatment. There are two principal constitutional approaches to treatment, namely the use of a long-term constitutional remedy or the use of a short-term constitutional remedy. Initially the homeopath will listen to the symptoms of the depression. He will then ask for more details, for example, "What time of day is your mood worse? Do you feel better or worse for company?' Precipitating factors are

inquired into, as well as any past history of depression. The patient will then be asked to describe any other current symptoms apart from the depression. This is because the constitutional remedy fits all current symptoms, not just the presenting complaint, hence physical symptoms can also help to choose the remedy. Next the homeopath inquires into past medical history and family history. Then general symptoms are sought, particularly food cravings and aversions, preference for heat or cold, and what time of day the patient usually feels best and worst. Finally the patient is asked to describe his or her personality. The homeopath will help by asking questions, once the patient has finished speaking.

The above is a brief summary of how a homeopathic interview is taken. In the case of depression, the homeopath must decide whether the symptoms of depression fit the remedy that fits the patient's long-term constitution, including the patient's personality. If so, then the long-term constitutional remedy is given. Generally in depression, either a single dose of a very high potency is given, usually in pill form, or a once daily dose of an LM potency is given, usually in liquid form. I find that about 80% of my depressed patients respond well to the long-term constitutional remedy. Many of them belong to one of five common constitutional types that are prone to depression, namely Natrum Muriaticum, Natrum Sulphuricum, Sepia, Carcinosinum, and Aurum. Each of these types has a full psychological profile, which will fit the personality of the patient if the remedy is indicated.

In a minority of cases, the depressive symptoms do not fit into the symptom picture of the long-term constitutional remedy. Sometimes they fit the picture of a related remedy. For example, people with the quick, mercurial Mercurius constitution often require the remedy Aurum when depressed. Aurum depressions are particularly intense and bleak, with much suicidal ideation. They occur in Aurum individuals often, but also in people of other constitutions, especially related ones like Mercurius. It is wonderful to observe how quickly the terrible anguish of an Aurum depression responds to potentized gold. If the patient is Aurum constitutionally, then the tendency to depression is very strong; and after the remedy is given, the patient will improve almost immediately (within a couple of days), but then gradually improve further over the next few weeks, back to his or her usual serious, intense, driven self, though a little less driven after taking the remedy. However, if the long-term constitution is less depressive than Aurum, then the remedy will usually act more quickly, bringing the patient back to his or her usual self within a matter of days.

Quite often a short-term constitutional remedy is required in depression to reverse the effects of specific traumas. Examples include Phosphoric Acid and Natrum Muriaticum in cases of depression following grief, and Sepia to

treat postnatal depression after a difficult birth. These remedies should not be prescribed routinely according to the trauma, but rather given when their symptom picture matches the symptoms of the patient.

Providing improvement is taking place, the homeopath will see the patient at gradually increasing intervals until depression is no longer a problem. Usually a single remedy is sufficient, which if given in high potency may have to be repeated after a few months if the depressive symptoms begin to return. In the case of a daily LM potency the remedy can be continued daily until the depression has passed.

B. HOMEOPATHIC TREATMENT OF ANXIETY

In many ways, the principles that govern the homeopathic treatment of depression apply also to the treatment of anxiety. Frequently, the long-term constitutional remedy is the most effective one, hence the patient's personality and physical appearance help in the choice of remedy, as does their past medical history. There are more constitutions prone to anxiety than are prone to depression, hence the choice of remedy is wider. All the psychological traits of the patient are considered by the homeopath before choosing a constitutional remedy. The patient may be a confident type generally, but prone to anxiety in certain situations. This would reduce the choice of appropriate remedies considerably, but would include Nux Vomica, Arsenicum Album, Causticum, Ignatia, Lachesis, Medorrhinum, and Mercurius. If the patient is also very resourceful in practical ways, then the choices of Nux Vomica and Arsenicum are favored. If the anxiety is specifically about the patient's health, then Arsenicum and Lachesis are to be considered. Specific fears can help a lot in identifying the best remedy in cases of anxiety neurosis. Arsenicum types tend to have a fear of dying, whereas Lachesis types have a fear of suffocation or of physical restriction. Medorrhinum is a psychic type who often has a fear at night that someone is behind her. Usually each trait will fit several remedies, but there is only one remedy that runs through all of them. This is the constitutional remedy and is likely to help reduce the patient's anxiety. As with depression, the remedy can be given once in high-centesimal potency or daily in LM potency.

A 38-year-old man once came to me for treatment of chest pain. He appeared jumpy, and his speech was hurried. He said he had had an ache in his chest for 2 weeks, since staying up every night to study for his upcoming college exams. I checked him out physically and decided his chest pain was psychological in origin. He said that he worried enormously before exams. He was studying to become a teacher. It was clear to me almost immediately that something was

strange about this man. His eyes flitted jerkily to the right and the left or stared maniacally to emphasize a point. I knew I would be choosing a remedy from one of three groups--either one of the hysterical types, like Nux Moschata, one of the mania remedies, like Stramonium, or one of the eccentric types, like Sulphur. Further case-taking led me to choose one of the eccentric types. My patient told me that he worried a lot about all sorts of things, especially about performance. He also said that he was impulsive. He gave as an example the way he had arrived in Australia from England. He said that one day he left home for a day trip on the ferry from Dover to Calais and back. On arriving in France, he found he did not have enough money for the fare back to England, so he just kept on going, hitching rides and working in bazaars to make ends meet. In this way he eventually reached Australia. At this point his remedy was clear to me. His impulsivity, anticipatory anxiety, and eccentricity could fit only one type, Argentum Nitricum, made from silver nitrate. I gave him a high dose, IM, and asked him to return in a few days. On his return he looked a lot more relaxed. He said that the chest pain had gone away within a few hours of taking the remedy, and he had decided to get more sleep, despite his imminent exams. Argentum Nitricum is a relatively uncommon type, suiting perhaps only half a percent of people, but in his case no other homeopathic remedy would have produced such a global improvement.

As with depression, one sometimes needs to use specific remedies for anxiety precipitated by specific stresses. For example, panic attacks that follow a shock can respond to a remedy made from opium (but containing no chemical opiates). Similarly, phobias that follow exposure to violence may respond to the vegetable remedy Stramonium. When anxiety is an integral part of a depressive illness, remedies are available that treat both aspects of the illness simultaneously, since they create balance generally in the emotional and mental level of the vital force. Such remedies include Arsenicum, Sepia, Carcinosinum, and many more.

C. HOMEOPATHIC TREATMENT OF ATTENTION DEFICIT DISORDER

As with most psychological disorders, attention deficit disorder (ADD) responds well to homeopathic treatment. Generally one can achieve as much with homeopathy as with dexamphetamine treatment, but without side effects. Again, the long-term constitutional remedy is the most likely to help. However, in the case of ADD and ADHD, the choices are far more limited than with depression or anxiety, so the homeopath only has to choose between about 10 remedies.

I find the first choice I make is between the relatively normal remedy types and those prone to more extreme behavior, including violence, obsessions,' and even delusions. This latter group of remedies treats both ADD and also autism and adult psychoses, and includes Stramonium, Hyoscyamus, Veratrum Album, Anacardium, and Belladonna. Often ADD symptoms combine with aggression and some degree of obsessiveness. Panic may also be part of the picture in these types. The specific personality features of the case will enable the homeopath to choose one from among this group of remedies. For example, if the child is very emotional, cries easily, and likes to fool around a lot, then the remedy is liable to be Hyoscyamus, especially if the child also loves to be naked. Veratrum children tend to be extremely hyperactive and also very obsessive, lining up their toys in straight lines and refusing to step on the lines between paving stones (the character played by Jack Nicholson in the film *As* Good *as It Gets* is a good example of a Veratrum personality). These remedies, when indicated, result in a general integration of the personality, which includes improved attention, decreased hyperactivity, and stabilization of mood. They also help to treat phobias and obsessions that may also be present.

Among the more normal ADD remedies, homeopaths have to choose between Carcinosinum, Mercurius, Tuberculinum, and several others. Again, the personality of the child as well as physical symptoms and ADD symptoms help the choice. Carcinosinum children with ADD tend to be insecure and very attention seeking. Provided they have their parents' attention, they will behave. They often suffer from dyslexia and other learning difficulties. Tuberculinum children are more straightforward. They are more confident, and hyperactivity predominates over reduced attention. They are, however, prone to tantrums. Mercurius children are very bright mentally, but they cannot stick to anything. They are relatively detached emotionally, and physically they are prone to tonsillitis.

The appropriate remedy can be given in cases of ADD and ADHD alongside chemical treatment with no ill effects. Once some improvement is seen, the drug treatment can often be tailed off and discontinued.

D. HOMEOPATHIC TREATMENT OF ADDICTIONS

Homeopathy has been used for centuries to treat addictions and withdrawal symptoms. It was noticed in the original provings of some remedies that the medicinal substance induced a craving for alcohol or tobacco in the test subjects. These remedies were then used successfully to reduce such cravings in patients. Examples include the remedy Tuberculinum, which can help reduce tobacco cravings, and Lachesis, which can reduce cravings for

alcohol. Generally these remedies are not very effective if used routinely. For example, Tuberculinum will not routinely reduce tobacco cravings, but when it fits the constitution of the patient both mentally and physically, it will reduce tobacco cravings in that patient. Thus, once again the homeopath must work to identify the remedy that most closely fits all aspects of the patient.

Not only will constitutional treatment reduce cravings for drugs, it will also generally enhance the mood and the energy of the patient and facilitate psychological growth. After taking the remedy Carcinosinum, for example, many patients who were previously a part of the drug subculture suddenly realize that they have been avoiding facing painful issues, and they find the strength to do so. They also find they no longer want to be around people who take drugs to avoid their feelings. The general psychological integrity of the patient can be enhanced markedly after only a few weeks of constitutional treatment, and it is this aspect that is so useful in treating addictions.

In addition to constitutional treatment, some remedies can be used simply to reduce cravings, particularly in the case of tobacco. The remedy Tabaccum is made by potentizing tobacco and can reduce cravings for the mother substance in some patients. Lobelia Inflata is a remedy made from a relative of the tobacco plant, which can also reduce cravings. These remedies can be used alongside constitutional treatment to augment its effect.

Certain remedies are effective at treating withdrawal symptoms. For example, Chamomila and Nux Vomica can both help ease the withdrawal from heroin. The heroin addict can use these remedies in addition to constitutional treatment and also conventional drugs to help withdraw from the drug. The choice of which remedy to use depends on the exact withdrawal symptoms experienced.

VI. HOMEOPATHIC TRAINING AND CERTIFICATION

A. OVERVIEW

Contrary to popular misunderstanding, most practicing homeopaths are quite thoroughly trained, having completed at least **3** years of a full-time course. (Most homeopathic courses are now changing to 4-year courses in line with new accreditation criteria being introduced throughout the world.) The first year is taken up largely by medical studies, including anatomy, physiology, and pathology, which usually continue into the second year. Students spend the bulk of the second and third years studying homeopathic principles and *materia medica,* the study of homeopathic symptom pictures

and their clinical application. During the third and fourth years, students generally gain supervised experience in the school clinic.

Many schools combine teaching of naturopathy and homeopathy, leading to a doctor of naturopathy qualification, which unfortunately tells nothing about the amount or quality of homeopathic training. Others teach only homeopathy, leading to a certificate or degree in homeopathy in North America or a diploma of homeopathy in the United Kingdom.

The best schools use video cases to illustrate the treatment of actual cases. This is essential when it comes to teaching homeopathic psychology, since each constitutional type has its own appearance and "feel," which cannot be expressed adequately in words. It must be seen and heard to be appreciated. Inadequate understanding of the essence of constitutional types, particularly with regard to psychological profiles, is the single most common reason why incorrect remedies are prescribed by homeopaths, which then fail to act therapeutically. Unfortunately, a certificate in homeopathy, or even a degree, does not guarantee a subtle understanding of homeopathy, especially with regard to the psychological aspects. Even a thorough training in homeopathic mental ~(as the mentals symptom pictures are known) by a master cannot overcome insensitivity in the student. To be able to differentiate between similar constitutional types on the basis of personality requires both experience and a natural aptitude for psychological observation, which only some homeopathic students have. However, good training certainly helps!

B. THE UNITED STATES AND CANADA

Seventeen schools in the United States and four in Canada offer homeopathic training. Of these, one Canadian and four U.S. courses offer postgraduate training.

There is a big difference between legal requirements to practice homeopathy and competency. Many are legally entitled to practice but are not competent, while others are competent but not legally entitled to practice. In the United States there are separate laws in each state governing who can practice homeopathy. Generally speaking, only medical doctors and osteopathic doctors can practice homeopathy in every state, and as far as I am aware, there is no legal requirement for these practitioners to have any specific homeopathic qualifications before practicing homeopathy. Many states also license naturopaths (DN) to practice homeopathy, as well as physician's assistants and nurse practitioners.

Most nonmedical homeopaths have completed a full-time course and obtained a certificate of homeopathy or a doctorate in naturopathy (specializing in homeopathy). However, it is worth noting that no diploma or certificate is

recognized as a license to practice homeopathy in the United States. If you want to know whether a homeopath is qualified to practice (as opposed to being legally entitled) contact The Council on Homeopathic Education, which monitors the quality of courses (see Resources).

It should be clear that medical homeopaths may have had little training in homeopathy but still may be entitled to practice, whereas nonmedical homeopaths may have had extensive training and yet not be legally entitled to practice. Many of the best medical homeopaths have studied with George Vithoulkas or one of his students. Further information on these can be found at the American Institute of Homeopathy (see Resources). The Hahnemann College in Richmond, California, offers a high-quality part-time course in homeopathy for health professionals.

C. THE UNITED KINGDOM

Unlike the United States, the United Kingdom has no legal requirements for the practice of homeopathy. Any man and his dog can call themself a homeopath and practice. However, medical homeopaths have usually studied with the Faculty of Homeopathy and passed the MFHom examination. This is a fairly basic exam, which does not require much knowledge of the psychological aspect of homeopathic prescribing.

Nonmedical homeopaths have usually but not always completed a thorough full-time 3- or 4-year course in homeopathy, leading to a diploma in homeopathy. Details of approved courses and qualifications can be obtained from the Society of Homeopaths.

VII. RESOURCES

A. BOOKS ON HOMEOPATHY

The Science of Homeopathy by George Vithoulkas, New York: Grove Press.
Homeopathic Psychology by Philip Bailey, Berkeley. CA: North Atlantic Books.
Portraits of Homeopathic Remedies by Catherine Coulter. St. Louis, MO: Quality Medical Publishing.

B. ORGANIZATIONS IN THE UNITED STATES

National Center for Homeopathy (and Council on Homeopathic Education)
801 North Fairfax, Suite 306

Alexandria, VA 22314
Phone: (703) 548-7790
E-mail: info@homeopathic.org

American Board of Homeotherapeutics (MDs and DOs)
Address as above.

Homeopathic Educational Services. For all homeopathic books
2036 Blake Street, Berkeley, CA 94704
Phone: l-(800)359-9051
E-mail: mail@homeopathic.com

C. SCHOOLS IN THE UNITED STATES

Hahnemann Medical College
Lindsay Hall, 235 Washington Avenue
Point Richmond, CA 94801
Phone: (510)232-2079
E-mail: hahnemann@igc.org
3-year part-time course for health professionals

San Diego Center for Homeopathic Education
1268 Birch Avenue
Escondido, CA 92027
Phone: (760)741-7875
2-year course taught by medical doctors

The American University of Complementary Medicine
11543 Olympic Boulevard
Los Angeles, CA 90064
Phone: (310)914-1446
E-mail: curentur@flash.net.
MA degree course recognized in California

New England School of Homeopathy
356 Middle Street
Amherst, MA 01002
Phone: (413)256-5949

The Renaissance Institute of Classical Homeopathy
5A Lancaster Street
Cambridge, MA 02140
Phone: (617) 547-8500
2-year course for health professionals

The Teleosis School of Homeopathy
61 W. 62nd Street 18E
New York, NY 10023
Phone: (212)977-81 18
E-mail: teleosis@igc.org
2-year course for health professionals

International College of Homeopathy
8306 Wilshire Boulevard, 728
Beverly Hills, CA 90211
Phone: (310)645-0443
2-year postgraduate course taught by world-famous George Vithoulkas

D. SCHOOLS IN CANADA

Homeopathic College of Canada
280 Eglington Avenew East
Toronto, Ontario M4P 1L4
Phone: (416)481-8816
E-mail: homeocol@inforamp.net
Postgraduate course

Vancouver Homeopathic Academy
P. O. Box 34095
Vancouver, British Columbia V6J 4M1
Phone: (604)708-9387

E. **ORGANIZATIONS IN THE UNITED KINGDOM**

The Faculty of Homeopathy
2 Powis Place, Great Ormond Street
London, WC IN 3HT
Phone: (0171)837-9469
Runs courses and exam for doctors and dentists

The Society of Homeopaths
4a Artizan Road
Northampton, NN 1 4HU
Phone: (01604)621-400
E-mail: societyofhomeopaths @btinternet.com
Accredits members who have completed approved courses

F. SCHOOLS **IN THE UNITED KINGDOM**

The School of Homeopathy
Yondercott House
Uffculme, Devon, EX15 3DR, England
Phone: (01884)840-230
A quality 4-year part-time course

For other schools contact The Society of Homeopaths or the Institute of Homeopathy, e-mail: www.hominf.org.uk/schools.

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Chapter 20

Acupuncture

John M. **Motl,** MD

I. ACUPUNCTURE: DEFINITIONS AND OBJECTIVES

A. DEFINITIONS

Acupuncture is the branch of traditional Chinese medicine (TCM) that is used to prevent and treat disease by the painless insertion of needles at certain key points in the patient's body. Within the context of acupuncture, it is accepted that these points are part of a system and are connected by channels,

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or meridians. Preliminary examination of the patient reveals which points and meridians need to be stimulated in order to treat a particular illness or health problem.

Fundamental to the practice of Chinese medicine is the belief that good health exists when internal organ systems are in balance and that, when those systems are not in balance, the result is poor health, or dis-ease. Over thousands of years of experimentation, Chinese practitioners developed specific techniques of precise stimulation of the key body points as a means of positively affecting the organ systems.

B. OBJECTIVES

1. Acquaint readers with the origins and evolution of acupuncture as a component of traditional Chinese medicine.
2. Discuss the concept of Qi (pronounced chee), or energy, as a basis for TCM generally and for acupuncture in particular. This discussion will include consideration of the forces referred to as yin and yang, the "five phases," the five organ networks, and the relationships of the phases and networks in diagnosing and treating health problems.
3. Describe acupuncture's increasing acceptance by Western health care providers and examine its potential usefulness as a tool for mental health practitioners.
4. Discuss pertinent research, indications, and contraindications for acupuncture treatment as an adjunct to mental health care.

II. HISTORY AND PRINCIPLES OF ACUPUNCTURE

A. IN CHINA

Some Chinese medical practices still employed can be traced back to about 10,000 BC. Acupuncture as a means of treatment has been in use for about 3000 years. The earliest text that mentions acupuncture is the *Huang* Di *Nei Jing* (Yellow Emperor's Inner Classic), published some time between 100 BC and 100 AD (Wong, 1987). The acupuncture system of points and channels and their connection to the causes and treatment of disease was first codified in the Nan Jing (Classic of Difficult Issues) (Unschuld, 1986).

In addition to acupuncture, TCM also includes nutrition, exercise (Qigong, Tai Chi), massage (Tui Na); acupressure, energy treatment (external

Qigong), herbal medicines, and heating treatments. The objective of all Chinese medicine is to maintain balance within the mind-body and between the mind-body and the environment. This approach is consistent with the tradition that the human body is a microcosmic reflection of the universe.

The Chinese sages have emphasized prevention over intervention, as is seen in this quotation from the ancient Chinese text, the *Su **Wen:***

> The superior physician controls disease before any illness has declared itself, the average physician practices acupuncture before the disease has come to its crisis; the inferior physician treats the patient when the illness is already dying away. (Gwei-Djen & Needham, 1980)

The Chinese system of medicine is based on the idea that the body-mind is essentially an energetic system, a view expressed, interestingly enough, in modern-day quantum physics. One may contrast the energetic system of TCM with the system of Western medicine, which sees the body-mind as primarily biochemical in nature.

Essential to the Chinese system is the belief that a person's mother and father contribute an energy package (which we would call egg and sperm) that is combined to create, prior to birth, "pre-heaven Qi." (Qi is a word much used in Chinese medicine, with no precise counterpart in Western vocabulary; "energy" would be the closest translation.) After the baby is born, the food and air taken in to nourish the body are called "post-heaven Qi."

For the Chinese, Qi has two major forms of expression, yin and yang. Yin, the feminine form, is cooling and nourishing. It is associated with the body's five major solid organs: heart, spleen, lungs, kidneys, and liver, these being the organs that produce vital substances for the body.

Yang, the masculine energy form, is warming and serves to move vital substances around in the body. Yang energy is associated with the five hollow organs: small intestine, stomach, large intestine, urinary bladder, and gallbladder.

When yin and yang energy are in balance, one enjoys good health. If either or both of these energies become deficient, or excessive, symptoms of disease will develop. An example of yin deficiency (seen much more in the West than in other cultures) is menopause. Consider the major symptoms: dryness, hot flashes, night sweats, and memory changes, all of which can be said to reflect a lack or nourishment, or proper "coolant," in the yin organs. The hot flashes are not a true fever but, in Chinese medicine, "empty heat"-very much like a car overheating when the coolant level is too low. In addition, in the United States, excessive menopausal symptoms derive from stress, poor nutrition, lack of an honored elder role for women, and a sense of loss of culture-rewarded qualities: the "perfect" body and perceived physical changes resulting from having had children.

Over the centuries, Chinese medicine has further evolved to include the concept of five primary elements of nature: earth, air/metal, water, fire, and wood. These are believed to organize the body-mind into five major organ networks (Figure 1). From the perspective of mental health, Chinese medicine holds that each organ system is related to a specific emotion: anger is associated with the liver; joy, or excitement, with the heart; pensiveness, or worry, with the spleen; grief and loss with the lungs; and fear with the kidneys. Consider the following in our culture: people who worry excessively often have ulcers; children who have unexpressed grief may experience asthma; children who have extreme fear often "wet the bed or "wet their pants"; people who express inappropriate anger are said to "spew bile" or have a "bilious disposition;" and people who show excessive excitement may appear hypomanic, manic, or "hyperactive."

The Chinese say that if one blocks or suppresses an emotion there is a negative effect on the organ system, and vice versa. This early realization, and the treatment which it engendered, meant that Chinese practitioners were, in effect, the first practitioners to work in psychosomatic medicine.

The practice for acupuncturists in China was to devote a lifetime to following the course of a particular patient's illness. In the absence of modern laboratory technology and assessments, they would record very detailed observations of a given illness or disease. These doctors noted that the roots of most chronic illnesses were likely to begin in infancy and childhood. Their assessments included a history and a physical examination, which included a six-level pulse reading and tongue diagnosis and an inquiry into physical and emotional symptoms. Through their knowledge of the five organ systems, these doctors could demonstrate how dis-ease would begin in one system and progress to other systems over the years. The patient's internal development was considered to be influenced by the environmental factors that the patient experienced, an approach not unlike those found in the principles of developmental psychology.

The specific clustering of mental and physical symptoms in one organ network, (e.g., a liver network imbalance creating migraines, depression, premenstrual syndrome (PMS), tendonitis, or dry, itchy eyes) and the movement of mind-body symptoms from one organ network to another are unique concepts not found in Western biomedicine. An understanding of the dis-ease from inception to the present time was critically important, as a cardinal principle of TCM is to treat the root cause, as well as the symptom, and not just treat symptoms, as is common in Western medicine.

Within the traditional Chinese system of medicine, illnesses, with the exception of trauma, were deemed to arise from excesses or deficiencies of Qi (e.g., a yin deficiency or a yang excess) or imbalances in energy

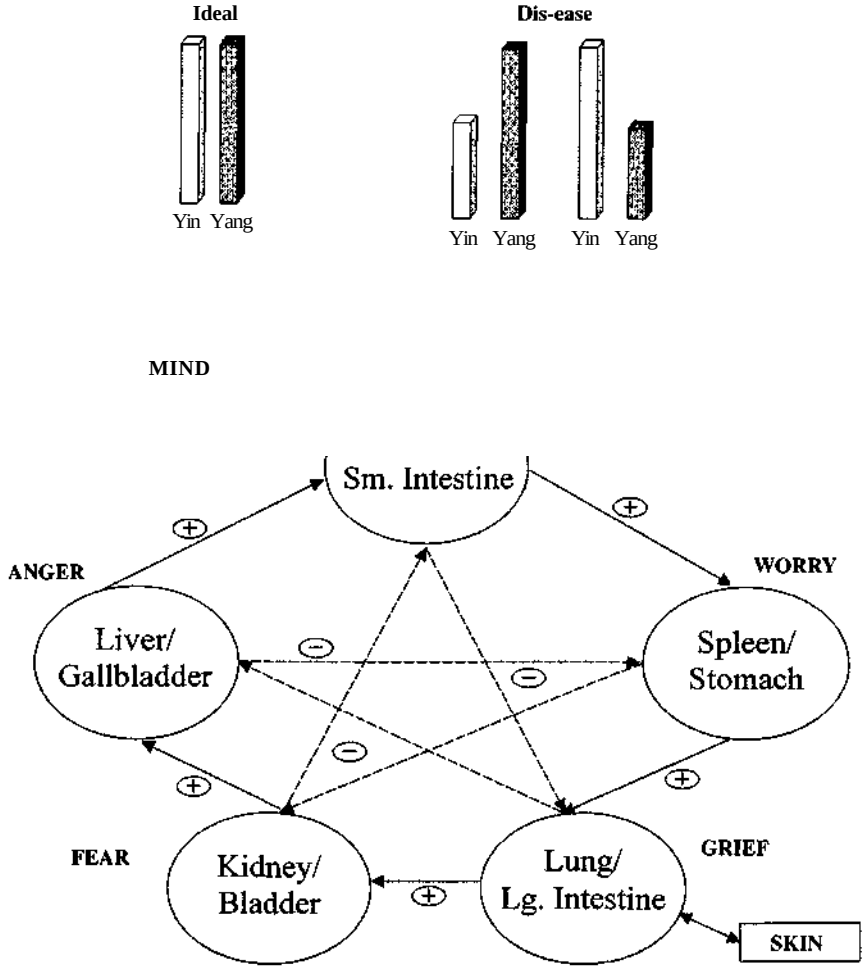

Figure 1 The body-mind is organized into five major organ networks. [Dis-ease-copyright 2001 by John M. Motl.]

flow between given organs. The top of Figure 1 shows examples of yin and yang imbalances. The lower portion of the diagram illustrates the positive energy flow from one organ to another in a clockwise fashion: heart-spleen-lungs-kidneys-liver-heart. The Chinese practitioner would state, for example, that the heart is the "mother to the spleen" and that if the mother is deficient, the child will be deficient or that the child may "drain" the mother.

As Figure 1 shows, if the Qi, or energy, in an organ becomes obstructed or deficient, that Qi may move via another pathway known as the "control cycle." This energy would proceed along the dashed lines from the lungs to the liver, from the liver to the spleen, from the spleen to the kidneys, from the kidneys to the heart, and from the heart to the lungs. This is one of the most common paths used in Chinese medicine to explain dis-ease development.

With roots that can be traced back some 10,000 years, Chinese medicine is among the oldest medical systems still in existence. In ancient China, the practitioner was paid to keep one healthy and, if the person became ill, treatment was free. The Chinese who developed their systems were usually spiritual leaders and, thus, medicine was seen as a way of balancing body and mind with spirit. When the Communists came to power in China, most spiritual references were purged and more philosophically acceptable notions of herbal-based medicine were adopted.

B. ACUPUNCTURE IN THE WEST

Chinese medicine was introduced into Europe in the sixteenth and seventeenth centuries by returning Jesuit missionaries and by Portuguese, French, Dutch, and Danish traders. French Jesuits coined the word *acupuncture* from the Latin words *acus* (needle) and *punctura* (puncture). The first significant Western medical publication referring to acupuncture was the *Histoire de la Chirurgie* (History of Surgery), published by Dujardin in 1774 (Dujardin, 1774). The popularity of acupuncture in Europe waxed and waned until the 1900s when George Soulie de Morant and Paul Ferreyrolles published many medical works, including *L'Acuponcutre Chinoise* (Chinese Acupuncture) (Soulie de Morant, 1972). This work introduced acupuncture into the mainstream of French medical practice and thinking. By 1980, an estimated 6000 French physicians were including acupuncture in their practice of medicine.

The first significant reference to acupuncture in the United States was in 1892 by Sir William Osler in his *The Principles and Practice of Medicine,* where he discussed using acupuncture in the treatment of lumbago and sciatica. In 1971, acupuncture received a dramatic boost in popularity when *New York Times* reporter James Reston published a front-page article describing how his postoperative pain from an appendectomy was relieved by the insertion of three acupuncture needles (Reston, 1971). Shortly thereafter, a team of United States physicians visited China and observed surgeries being performed with acupuncture anesthesia. They published a favorable article in the *Journal of the American Medical Association (JAMA) in* which they recommended further research (Dimond, 197 1).

In 1972, when President Nixon visited China, his personal physician, Dr. Tkash, witnessed similar usages of acupuncture anesthesia. This doctor endorsed the conclusions of the JAMA authors (Tkash, 1972). Subsequently, the National Institutes of Health sponsored research grants to study the fundamental science and the clinical applications of acupuncture (Chen, 1972).

Acupuncture has steadily grown in acceptance in the United States, and by 1991 an estimated 1500 physicians and 8000 other professionals were practicing acupuncture. The number of practitioners doubled by the year 2000. In 1997, an estimated 5,377,000 acupuncture treatments were administered to patients in this country (Eisenberg ***et al.***, 1998).

In 1996, the Food and Drug Administration reclassified acupuncture needles from Class III (experimental devices) to Class II (standard medical devices to be used by qualified medical practitioners)(FDA, 1996). This reclassification removed an obstacle for insurance coverage, as many insurance companies would not pay for what could be termed experimental procedures.

In 1997 the National Institutes convened a Consensus Development Panel on acupuncture and, after reviewing all available literature, concluded that acupuncture was clinically effective for the treatment of chronic pain and nausea (NIH, 1997). This was the first time that any alternative medicine modality had been endorsed by the nation's highest scientific body.

III. CLINICAL INTEGRATION OF TCM INTO WESTERN PRACTICE

A. CASE HISTORY

My own training in medicine was first in neurology, then in psychiatry. My interest in the latter resulted from a recognition that physical assessments alone were not sufficient to fully understand the panoply of underlying causes that produce various illnesses and dis-eases. I later became intrigued with the potentials of acupuncture for furthering this objective and began training in that field in 1993. A typical case history from my own practice may illustrate the possible efficacy of acupuncture in the general field of mental health. Please refer to Figure 1 as you consider this briefing.

At the local university health service facility, a 20-year-old Caucasian female student was referred to me for treatment of depression and anxiety. Born into an alcoholic family, the patient witnessed emotional lability and marital discord from her parents. Her father moved away when she was 2 and her mother had to return to the workforce. Growing up caring for one

younger sibling, the patient learned to be a "good girl" and to avoid upsetting her mother with her own emotions.

In early childhood, the girl required treatment for bronchitis and pneumonia. At age 10, she began having migraine headaches. The family doctor prescribed medications. At about age 12, the patient began to have periods of depressed mood, fatigue, and some sleep disturbance, all of which symptoms she minimized. At age 13, she began her menstrual periods and noticed significant premenstrual symptoms.

By midadolesence, the patient was experiencing upper gastrointestinal (GI) pain and heartburn and, again, these were treated symptomatically. She went away to college and noted some depression symptoms, but pushed those feelings away by staying busy with her studies. She began her first serious relationship during her freshman year. As is somewhat common, this first relationship ended with much upset and sense of loss.

The patient kept on going, as she was accustomed to, until a panic attack in class sent her to the local hospital's emergency room. Preliminary examination revealed no underlying cardiac disease. She was referred to the university's counseling center which, in turn, referred her to me for a medication evaluation. In Western medicine, under the current managed care environment, this person would have most likely been given anxiolytics or antidepressants and, perhaps, short-term psychotherapy.

If you were a Chinese practitioner, you would have listened to this history and noted that symptoms began in the lung system (with suppressed grief and loss, bronchitis, and pneumonia), then (as Figure 1 depicts) moved along the control cycle to the liver (with anger suppression, migraines, depression, and PMS). From there, you would chart the flow, still on the control cycle, to the spleen and stomach system (upper GI symptoms) and, lastly, you would recognize a major loss (freshman love interest) which activated early-life suppressed losses, and then the liver energy became stagnant and caused the liver to overheat the heart, leading to a panic episode (excess excitement).

Considering this case history and working within the Chinese tradition, the acupuncture practitioner can address, with more lasting results, the root condition (lungs, grief, and loss) as well as the liver, which is triggering most of the current symptoms (depression, migraines, PMS).

The combined Eastern and Western diagnosis and treatment of this young woman consisted of psychotherapy focused around grief work, antidepressants (short term) to restore function, nutrition, exercise, acupuncture that focused on liver and lung points, and Chinese herbs to "open the liver" and "harmonize the lungs and liver." This "integrated" treatment approach produced more rapid resolution of symptoms and longer-lasting results than Western or Eastern methods alone would have done.

In Chinese medicine, herbs are a major therapeutic modality. Herbs are utilized as the primary treatment for internal medicine problems, such as hypertension, diabetes, digestive problems, and others. Acupuncture is used as an adjunct to herbs in those disorders as well as the being the primary treatment for musculoskeletal disorders. Mental health problems would generally fit into the internal medicine category and herbal medicines are used effectively in treating them. Herbs are used to restore balance to the disorder such as yin-tonifying herbs restoring a yin deficiency (e.g., menopause) and heat-dissipating herbs to treat a yang (heat) excess condition (e.g., hypertension, migraine, fever). In the five-phase model we have discussed in our case history, herbs can also be used to remove stagnation of the liver commonly seen in depression or to calm the heart disturbance seen in anxiety disorders. One of the most important uses of herbs in our patients is in the treatment of chronic health problems. In these conditions, the Chinese practitioners have found that almost all long-standing problems have a component of yin (vital substance) deficiency. Most of our Western treatments are focused on effectively removing the symptoms, but fail to see that behind the surface symptoms is an underlying deficiency or weakness in the body-mind-spirit system. Herbs can successfully tonify a weak system in ways that our medicines cannot address. This is a promising area for integrative treatment with Western solution-focused psychotherapy and medicines treating the initial problems and herbs, with nutrition, exercise, "depth"-oriented psychotherapy, and spiritual practice restoring the integrity of the person for the long term.

In working with this young woman, Chinese medicine, including acupuncture, showed us the association between certain emotions and specific organs and, as well, gave us the paradigm to explain why bronchitis happened first, followed en suite by headaches and depression, then PMS, then gastrointestinal dis-ease, and finally panic attacks.

B. IMPLICATIONS FOR WESTERN MENTAL HEALTH PRACTITIONERS

1. The Western Biomedical Paradigm

In Western mind-body medicine, we have begun to understand the family-of-origin issues that create emotional distress and character traits that lead to psychosomatic illnesses. We understand the brain chemistry imbalances associated with emotional illnesses and have created powerful medicines that are helpful in crisis situations such as this. It is noteworthy that these are largely Western medical concepts that can be a significant contribution to all fields of medicine, East or West.

This case history illustrates the relevance of acupuncture and Chinese medicine to mental health practice. Within the philosophy of Western biomedicine, mental health practice has operated in the same diagnostic and therapeutic styles as our medical counterparts.

Western medicine was organized around the infectious disease model. We collect symptoms, group them into diagnostic categories (DSM-IV), and treat the person according to the diagnosis. Within this framework, we treat all bipolar, depressed, and schizophrenic patients in the same manner. Psychotherapy attempts to individualize the dynamics and family-of-origin issues, but managed care companies continue to assign treatment according to diagnosis.

2. Biopsychosocial Trends

a. Where We Have Been

Experienced Western mental health practitioners realize that mental illness is a multifactorial phenomenon in which nutrition, exercise, environment, spiritual and core beliefs, cultural experience, and family-of-origin issues all must be considered in addition to biology.

We have also learned that such intangible issues as compliance, the placebo effect, the therapist- or physician-patient relationship, rapport, transference and countertransference, and gender, racial, and/or sexual orientation insensitivity can influence the 'outcome. Many therapists have utilized cognitive-behavioral therapy to clarify the patient's issues and have given the patient methods for change, only to observe the person staying "stuck." Even with prescribed medications added to the therapeutic mix, many patients have continued to struggle to achieve change on a long-term basis.

b. Where We Can Go

In an effort to be more effective with their patients, physicians and therapists have sought adjunctive methods to facilitate change and promote healing. The psychotherapy process has been enhanced by the inclusion of such treatment modes as massage therapy, healing touch, nutrition, exercise, and herbal medicine.

Acupuncture and other forms of Chinese medicine can make significant contributions to current Western psychotherapeutic and biomedical treatments. Benefits would be found in both increased diagnostic precision and treatment options. An example of the former would entail the acupuncturist using Chinese medical diagnosis (history, pulse, tongue, auricular [ear] diag-

nosis, and general physical examination) and identifying a pattern of organ system dysfunction that may be helpful in choosing medicines, herbs, or other treatments.

IV. ACUPUNCTURE DIAGNOSIS AND TREATMENT

A. DIAGNOSTIC PROCEDURES

1. Auricular

An interesting diagnostic approach used by many acupuncturists is auricular diagnosis. The procedure involves moving a sensitive electrical probe over the ear and recording points of increased activity. Certain areas of the ear have been correlated to body or organ areas, a model somewhat similar to the upside-down homunculus (body representation) described by neuroanatomists as existing over the sensory and motor areas of the brain. This approach was first described by French neurologist Paul Nogier (Nogier, Bourdiot, & Carcelle, 1976), and later studied and supported by a double-blind controlled study at UCLA (Oleson, Kroening, & Brester, 1980). Combined with other Chinese and Western evaluations, the auricular diagnostic system may help mental health physicians to become aware of concurrent medical problems in patients with psychiatric symptoms. It is already used by some physicians, trained in both Western and Eastern medicines, to discover information helpful in nutritional support for patients or to guide them in their choice of medications, possibly saving weeks of trial and error.

2. The Five-Phase Model

Diagnostically, the five-phase (organ system) model could help psychotherapists realize that if certain significant physical symptoms were observed, present and past, specific emotions would likely be out of balance. This could help clarify complicated presentations of physical and psychological symptoms that psychotherapists are called on to treat.

B. TREATMENT OPPORTUNITIES

1. Ongoing Treatment Needs

The second general use for acupuncture is in the treatment of various mental health disorders. Examining the strengths and weaknesses of Eastern and

Western medicine systems will give us clues to the optimal timing and uses for acupuncture in mental health. Western medicine emerged from perceived needs for treatment of acute, life-threatening illnesses, whereas Eastern modalities, including acupuncture, act by assisting the body-mind to heal itself. To be successful in carrying out their mission, Western treatments need to be potent and quick-acting; they need to make the mind-body do something to restore health. Consider the implications found in the names of our general classes of medicines: antidepressants, beta-blockers, ace inhibitors, antacids, anticonvulsants, mood stabilizers, and so on.

In a mental health crisis, the obvious first-line treatment would be medications and solution-focused psychotherapy. After the crisis is stabilized, acupuncture can be instated to provide maintenance support, allowing medications to be tapered. This combination provides the advantage of prompt, effective treatment while avoiding significant side effects, medication interactions, and the tolerance associated with chronic medication use. This is especially important in at-risk populations, such as children or the elderly. Acupuncture, along with such other synergistic modalities as herbs, exercise, nutrition, and longer-term psychotherapy, can subsequently be employed to prevent relapses.

2. Acupuncture and Prevention

The final application of acupuncture to mental health is in the area of prevention, one of the weaker aspects of Western medicine. As we saw in the quotation about the "superior physician," acupuncture and Chinese medicine strongly emphasize the power of prevention. If we listen to our patient's history with a Western bio-psycho-social ear, and an Eastern five-element developmental ear as well, we might learn of vulnerabilities and patterns that could be addressed long before dis-ease occurs. With a balanced approach of nutrition, exercise, spiritual exercises, acupuncture, and psychoeducational and psychotherapeutic healing modalities, we undoubtedly would make a significant and positive impact on the health of our nation's citizenry.

V. CAUTIONARY CONSIDERATIONS

A. REPORTED INCIDENTS

The National Institutes of Health review of acupuncture in 1977, (NIH, 1997) stated, "the occurrence of adverse events in the practice of acupuncture has been documented to be extremely low." A review of the medical literature

in 1995 showed only 125 documented adverse reactions or complications (NCCA, 1993).

B. PSYCHOLOGICAL PERSPECTIVE

To protect the patient emotionally, it is important to ascertain prior to treatment if the patient has any severe needle phobias or if he or she has physical or sexual abuse histories (as needling is an invasion of boundaries).

Caution should also be observed with patients having dissociative or borderline features, since the acupuncture treatment can release endorphins, which in turn can create a mildly altered state. Acupressure or laser acupuncture, initially, can be used for such individuals and, when they become more comfortable, traditional needle treatment can be utilized. Many people notice a pleasant sense of relaxation or light-headedness after treatment, a sense that may persist from a few hours to a day or two. Generally, patients are asked to leave some time free after the initial sessions, so that they are able to sit in the office for a bit before rushing off to other activities, and they are discouraged from strenuous activity or exercise for the remainder of the day. Young children are offered laser acupuncture or acupressure, as they often do not tolerate needling well.

C. POSSIBLE PHYSICAL CONCERNS

The common and mild physical adverse reactions to acupuncture may involve contact dermatitis from the metal needles, minor bruising, aching of muscles, and temporary exacerbation of the underlying symptoms, the latter being an indication that healing is taking place.

Rarer adverse reactions include infections, puncturing an organ (especially the lungs, an event termed pneumothorax), syncope (needle shock), needles being retained in the body, minor sensory changes from puncturing a nerve, and hematomas.

There are three medical conditions requiring special caution: pregnancy, patients taking anticoagulants, and patients with pacemakers. In pregnancy, special precautions are necessary to prevent uterine stimulation and puncturing of the abdomen. Patients taking anticoagulants can be treated, but caution must be exercised not to needle areas with rich blood supply. Persons with pacemakers should not be treated across the trunk with electrical acupuncture. Generally accepted needle precautions should be used by all practitioners. There have been no documented cases of HIV infection spread through acupuncture treatment.

Finally, if a practitioner is using acupuncture to lower blood pressure, for example, and the person is already on antihypertensive medications, consultation with the person's physician is necessary to coordinate treatment and to avoid untoward reactions.

VI. REVIEW OF CURRENT RESEARCH

A. BASIC SCIENCE MECHANISMS

1. The basic science research has focused on:

   a. *The biological and electrical properties of the acupuncture points and channels.* Acupuncture points were studied electrically (Niboyet, 1963) and found to have qualities of high conductance and low resistance to electrical flow, compared to surrounding skin.

   b. *The tissue morphology of acupuncture points.* A number of authors have conducted histological (tissue) studies of acupuncture points in cadavers and in animals (Heine, 1990) and have concluded that these points are significantly different than surrounding skin. The points consist of a tangle of nerves, an arteriole, a vein, and a lymphatic vessel.

   c. *The propagation of energy, or electricity, along the channels.* The theory that energy or Qi moves along these channels from point to point has been studied with the radioactive tracer technicium 99 (Durras *et ah,* 1993). Initial studies have shown movement along the postulated channel, compared to passive diffusion when injected into other skin areas.

   d. *The neuroanotomical pain mechanisms and endogenous opiate peptides.* The pain inhibiting effects of acupuncture are extremely well-studied and fall into two categories:
      i. Inhibitory control.
      ii. Endogenous opiate peptides (Clement-Jones *et al.,* 1980).
         - Strong stimulation with an acupuncture needle causes a dampening of the pain perception by inhibiting brain pain pathways, a process called diffuse noxious inhibitory control.
         - The most convincing evidence for acupuncture pain effectiveness comes from evidence of the release of endogenous opiate peptides (endorphins, enkephalins), which have strong analgesic and euphoric effects (Rabischong *et al.,* 1975).

Clearly, acupuncture, especially electrical acupuncture, releases endorphins into the cerebrospinal fluid, and this effect is reversed by the opiate antagonist Naloxone (Pomeranz & Cheng, 1979).

B. CLINICAL RESEARCH FINDINGS IN MENTAL HEALTH

In the clinical studies, clearly the bulk of research has been in the area of pain treatment. Research in the application of acupuncture to the mental health field has produced some good news, as is evidenced by the publication of several promising studies in a variety of illnesses.

1. Addiction Treatment

The best known of these is the rather extensive group of studies in the area of addiction treatment. Several studies have shown that needle treatment applied to the ears can significantly reduce withdrawal, cravings, and relapse rates in addicted patients (Smith, 1998). The most recent report was a randomized, controlled trial of auricular acupuncture for cocaine dependence, published in the prestigious *Archives of Internal Medicine* (Avantis, Margolin, Holford, & Kosten, 2000).

2. Depression Treatment

Research in the treatment of depression is less voluminous, but better studies have been published recently, such as the one from the University of Arizona (Allen, Schnyer, & Hitt, 1998) in which 64% of women treated with acupuncture experienced full remission, according to DSM-IV criteria. This response rate is encouragingly similar to rates based on pharmacology or psychotherapy modes of treatment.

3. Other Conditions

Acupuncture has not been studied in the United States for the treatment of bipolar disorder or schizophrenia. Anecdotal studies in China suggest that acupuncture and herbs were "effective" in treating schizophrenia, but the research design would not be considered up to American standards. No controlled studies have been done yet for the treatment of anxiety disorders, although in clinical practice many acupuncturists report good to excellent results.

C. RATING THE RESEARCH

The following lists summarize the overall research ratings of acupuncture research on an ascending scale of 0-6.

1. Basic Science Research

1. Acupuncture point morphology and electrical properties - 6
2. Movement of energy along channels-3
3. Neuroanatomical model for acupuncture - 6
4. Endorphin theory for acupuncture - 6

2. Clinical Research

1. Pain management - 6
2. Addiction treatment-5 to 6
3. Depression treatment4
4. Bipolar, schizophrenia, and anxiety treatment-1

D. FUTURE DIRECTIONS

Research in the applications of acupuncture to mental health is just beginning to be funded in most areas of concern. Addiction research, a welcome exception to this slow start, is becoming the preferred treatment in some areas of the country, as a result of both cost-effectiveness and positive treatment results.

Considering the positive findings of studies to date, I believe that we will see an upsurge in the funding of mental health applications. Research in this area, as in other integrative medicine modalities, does not always translate directly from one paradigm to another. We must resist the cultural bias that all world ideas must be judged according to Western concepts. There is ample evidence now to demonstrate that, when this is done, patients, health care providers, and all fields of medicine will benefit significantly.

VII. BEYOND RESEARCH

A. CLINICAL POSSIBILITIES

Acupuncture has been used beyond the research setting to treat a variety of common mental health problems. We will describe a general approach, which

might be used by many acupuncture practitioners to treat a number of these problems.

1. Unipolar Depression

In cases of unipolar depression where the symptoms are not severe, acupuncture can be a helpful first approach in treatment. In keeping with the Chinese medicine tradition, the individual is regarded and treated as a unique combination of energetic imbalances, not empirically according to a symptomatic diagnosis. This being said, some patterns of imbalances occur more frequently in a diagnosis such as depression. One of these patterns might be liver Qi stagnation, often related to excessive energy moving along the control cycle from the lung system, which often has been affected by suppressed grief and loss (as in our previous case example). Acupuncture treatments, lasting 30-45 minutes each, would be scheduled once a week. The acupuncture practitioner would also frequently recommend Chinese herbs to "open" the liver and "harmonize" the lungs and liver, the herbs to be taken concurrently with the acupuncture treatments.

The most common points used in depression treatment are located on the top of the head and forehead (governor vessel points), on the trunk below the liver, and the top of the foot (liver points). Electrical connectors may be applied to the needles on the head, and low frequency stimulation (2-4 hertz) is used. On average in chronic problems, a course of six to eight treatments is recommended. Reassessment is made at the end of this sequence to determine subsequent number, frequency, and type of treatment sessions still needed, if any. Exercise, meditation or relaxation techniques, and nutritional modifications would likewise be utilized. Gradual improvement in symptoms would be expected in 2-4 weeks, similar to medication treatment.

2. Anxiety Disorders

Anxiety disorders also can be addressed with acupuncture. In Chinese medicine, disorders of the kidney and heart systems would be the most frequent dysfunctional patterns observed. Based on the examination, specific Chinese herbs, nutrition, and exercise would be recommended. Acupuncture points commonly used would be located on the anterior or palmar surface of the wrist and elbow (heart points), and areas on the medial ankle (kidney points) would be needled. **A** similar number of treatments would be used as in depression.

In the more severe anxiety syndrome of panic disorder, in the author's experience, benzodiazepines should be utilized immediately to control symptoms and prevent escalation. Relaxation techniques, psychotherapy, and acupuncture

can be implemented once the condition is stable. Adding acupuncture and herbs to this treatment has allowed for a more expeditious tapering of potentially addicting medications than would have been possible before.

3. ADDIADHD

Attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) refer to a complicated syndrome, not often seen in China. The patients have a variety of patterns of imbalance, as with other diagnoses. Chinese practitioners who have witnessed ADDIADHD have observed that prenatal factors are important in the development of this disorder. Current Western nutritional studies have shown a nutritional deficiency in essential fatty acids in children with ADDIADHD. It is thought that one of the reasons we are seeing so much of this disorder is that some women have become so phobic about fat intake that they take almost no fat in their diet during pregnancy.

In Chinese medicine, disorders related to growth and development are most often associated with kidney system deficiency. The kidneys are the water element, and they have a mutually beneficial relationship with the heart, the fire element (water cools fire and fire warms water). The heart houses all the mental functions (reasoning, memory, sleep, judgment, etc.). When the kidneys are weak, the heart fire is allowed to "flare up" and the mental functions become overstimulated, as we see in ADDIADHD or manic symptoms. Acupuncture practitioners have found that "tonifying" the kidneys and "sedating" the heart with acupuncture and herbs has been helpful. Combining this with fish oil and EEG biofeedback could be a very helpful adjunct.

4. Addiction

Addiction treatment has been the most widely applied acupuncture treatment in the mental health field. The National Acupuncture Detoxification Association (NADA) has codified a pattern of five needles inserted in the ears, five times weekly for 8 weeks. This approach alone, without herbs or other modalities, has been successful in both detoxification and relapse prevention for multiple addictive disorders.

B. APPROPRIATE REFERRAL STRATEGIES

1. Licensure and Training

A suggestion, based on clinical experience, is for mental health therapists to refer patients to trained acupuncturists for concurrent treatment. How can

we be sure that the acupuncturist is well qualified to deal with our patients? There are three main groups of practitioners in the acupuncture field in the United States: physicians (MDs), graduates primarily of the UCLA medical acupuncture program, graduates of 3-year traditional Chinese medicine schools, and others (chiropractors, naturopaths, etc.) with varying degrees of training. With physicians, one should ask if he or she has completed the UCLA course and is a member of the AAMA (American Academy of Medical Acupuncturists). For graduates of the TCM schools, one should look for certain initials after the practitioner's name: LAc (licensed in the state), RAc (registered in the state), and NCCAOM (a national examination in acupuncture and herbal medicine similar to a national board exam). Ask to see a CV and proof of training, along with references from prospective referral practitioners. Ask colleagues or patients for names of acupuncturists they have referred to or have been treated by. For mental health patients with more complex problems, refer to one of the above two groups (physicians and TCM graduates).

2. Schools of Thought and Practice

As in psychotherapy, acupuncture has many theoretical schools or groupings, which are derivatives of the Chinese methods. Japanese, Korean, Vietnamese, French, the five element school of England, and American medical acupuncture are all outgrowths of the Chinese methods. For mental health patients, all of these schools have had relatively similar results clinically, but more research has been done with TCM and medical acupuncture. Acupuncture is available in most midsized to large communities across the United States.

3. Insurance

Insurance coverage is expanding but unfortunately, as with mental health, benefits often are sporadic, usually covering only a small percentage of the treatment. The costs for treatment sessions range widely, from $60 to $120 for initial evaluations, and $50 to $100 for follow-up treatments (the more expensive costs are for physician visits or in major urban locations).

C. CONCLUSION

Acupuncture as a treatment modality has been increasingly validated in the United States and has become highly popular with the public. Many

health care practitioners have incorporated it into their practices. Applications to mental health disorders have been successful in the treatment of addictions, possibly effective in depression, and show promise in anxiety disorders and ADD/ADHD.

Acupuncture's acceptance into the mainstream of Western treatment is an inspiring example of the potential benefits of integrative medicine. When we blend the best strengths of these diverse systems-Western medicine for crisis care and, cautiously, in chronic care; Eastern medicine, for prevention and chronic care-we will have created the superior health care system that our patients expect and deserve.

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Chapter 21

Ayurveda

Jim Brooks, MD

I. INTRODUCTION

As a psychiatrist, I am deeply interested in Ayurveda, the system of natural medicine from India, and its application to the field of mental health. In addition to my Western training in the mental health field, I have, in parallel, spent the past 20 years studying, researching, and writing about Ayurveda, which is now fully integrated with my Western psychiatric practice. I have found that there is a rising interest in natural approaches to healing within my patient population, which, according to public health statistics, appears to be a reflection of a growing trend in society as a whole.

Handbook of Complementary and Alternative Therapies in Mental Health

Ayurveda is the world's oldest existing system of traditional medicine. Its source is the Vedic tradition of India. Its recorded history began 5000 years ago with the treatise *Athawa-Veda* (Varma, 1995). The 3000-year-old *Charaka* (1981) and *Sushruta* (1981) *Samhitas* provide a comprehensive explanation of the etiology, pathophysiology, and natural treatment approaches for medical and psychiatric disorders, and are still used today in the training of Ayurvedic physicians in India. In addition to providing treatment approaches for mental and physical disorders, Ayurveda also emphasizes treatment strategies for disease prevention and the promotion of mental and physical health. These treatments are holistic in that they involve a comprehensive approach that simultaneously addresses the psychological, physiological, behavioral, and environmental components of the individual.

Due to hundreds of years of foreign rule in India, much of the essential knowledge of Ayurveda was lost. Since the country gained its independence, however, there has been a resurgence of Ayurvedic medicine in India. More than 100 Ayurveda colleges have now been established in India, a number of which are fully supported by the Indian government. The World Health Organization has formally recognized and given support to the reestablishment of this system of health care. In the United States, Ayurveda has become popular in the past 10-15 years. Ayurvedic clinics can be found in several major cities across the country. Due to variability in orientation and physician training, however, not all Ayurvedic programs are alike. Some focus primarily on the herbal treatment of diseases, while others have a more holistic approach, emphasizing the prevention and promotion of ideal health.

My orientation and training has been in Maharishi Vedic Medicine (MVM), an Ayurvedic program developed by Maharishi Mahesh Yogi, the founder of the Transcendental Meditation@ program and many academic institutions around the world, including the Maharishi College of Vedic Medicine, with its main campus in Fairfield, IA. The Maharishi College of Vedic Medicine is one of the designated research institutions of the National Institutes of Health for the study of preventive and natural medicine. In addition to Ayurveda, MVM includes all 40 branches of Vedic literature as treatment modalities.

For example, the study of Vedic architecture (Stapathya-Veda) reveals how to build a home, office, or even a city in such a way that is promoting rather than damaging to our health. Another branch of the Veda, Gandharva-Veda, is

the study of how music can be a vehicle to treat illness and to promote better mental and physical health.

An additional value to studying all 40 branches of the Vedic literature, including Ayurveda, is that each branch is correlated with a particular aspect of human physiology (Nader, 1995). According to MVM, when one listens to the chanting of any particular branch of the Veda, the corresponding aspect of the physiology gets enlivened. Recent unpublished research on the use of Vedic sound frequencies to treat common medical and psychiatric conditions indicates that this may be an effective healing modality (Scharf, 1999).

I have found the framework of MVM to be most appealing out of the Ayurvedic programs currently available for several reasons: (1) It is authentic, being linked to the 5000-year-old Vedic tradition of India; (2) Its principles are "user-friendly," in that they are explained in a logical and scientific manner; (3) The treatments have been verified through extensive scientific research; (4) The training is available through accredited universities; (5) When properly monitored, it is safe and effective in the treatment of mental illness; (6) It provides easy to learn, practical techniques for the development of mind, body, and spirit.

MVM includes many other therapeutic modalities that had virtually become lost, including, most important, methods to develop higher states of human consciousness. The theoretical knowledge of MVM includes Maharishi's explanation that, in addition to three known states of consciousness (i.e., waking, dreaming, and sleeping), there are higher states of consciousness that sequentially develop to unfold the full potential of human life (1969). Modern scientific research on Transcendental Meditation, one of the main modalities of MVM, indicates that these higher states of consciousness have their own specific psychophysiological parameters (Alexander & Orme-Johnson, 1990). In his books *The Neurophysiology of Enlightenment* (1986) and *The Physiology of Consciousness* (1993), Wallace described some of the physiological correlates found in individuals who are developing toward higher states of consciousness, known traditionally as "enlightenment."

According to Ayurveda, the prevention and treatment of all physical and mental disorders should include practical techniques that promote the holistic development of both mind and body. The treatment is not limited to one part of the individual, such as one organ system or one chemical, because a disease is understood to affect the whole system. For example, if a person has frequent insomnia, the Ayurvedic physician trained in MVM would not only treat the immediate problem, but would also instruct the patient in how to prevent the condition from occurring in the future. Because all disorders, including insomnia, are understood to involve psychological as well as physiological

factors, the doctor would recommend a variety of treatments to ensure the advancement of not only physical, but also psychological health.

For example, he would make certain dietary and herbal recommendations in order to reestablish balance in the physiology. The patient would also'be taught how to understand his or her psychophysiological constitutional type (described later) so that foods eaten in the future would not contribute to the development of insomnia. At the same time, he or she would learn appropriate daily routines in order to maintain proper balance between the biological rhythms in the body and the natural daily, monthly, seasonal, and yearly rhythms of the environment. Insomnia, for example, may be aggravated during the fall and winter months; therefore, certain behavioral measures such as daily warm oil massage, avoiding sleeping during the daytime, drinking hot water frequently during the day, using certain herbal seasonings in the food, and taking certain mixtures of herbal preparations that promote sleep, etc., may be extremely useful in alleviating insomnia. In addition, the physician may recommend that the individual learn one of the mental techniques of MVM, including the Transcendental Meditation (TM) technique. This technique has been shown to be an effective treatment for insomnia (Miskiman, 1972). In summary, Ayurveda and MVM are complementary to current medical practice, because they do not just focus on the specific symptom, but address the system as a whole, in a natural way, which results in a more comprehensive, safe, and lasting result.

II. THE RELEVANCE OF AYURVEDA TO MENTAL HEALTH

The classical textbooks of Ayurveda describe the etiology of mental illness from several different perspectives; in other words, the cause is usually multifactorial, but all these factors are usually intertwined and can be understood to be primarily either psychological, physiological, behavioral, or environmental.

The main cause of mental illness (and all disease), according to Ayurveda, is called in Sanskrit "pragyaparadha." The English translation of this word is "mistake of the intellect." The intellect identifies itself with the outer, changing aspect of life and therefore loses the experience of pure consciousness, the inner, nonchanging aspect of life. The understanding of pragyaparadha had over time become misinterpreted in the practice of Ayurveda. The reinterpretation of this concept is one of the main contributions that MVM has made to the study of Ayurveda. During the practice of the TM technique, the experience of pure consciousness has a corresponding style of physiological functioning that includes EEG coherence

(Banquet, 1973), marked reduction in metabolic rate (Wallace, 1970), increased skin resistance (Orme-Johnson & Gelderloos, 1973), low levels of cortisol (Bevan, 1977), and a constellation of other neurophysiological parameters (Wallace, 1993). The effects of the practice of TM result in a stable sense of inner satisfaction, regardless of what events might be going on externally. With the elimination of pragyaparadha, the internal, steady experience of the self promoted by meditation is seen in clinical practice to be a wonderful vaccine against a wide variety of mental imbalances and addictive behaviors.

Clinically, I have found the application of this principle of promoting balance between mind, body, and pure consciousness (Self) to be extremely useful in treating both psychiatric and addictive disorders. This can be illustrated in the case of Susan, a woman in her sixties who carried the "dual diagnosis" of substance abuse and major depression linked with panic attacks and agoraphobia. Susan was "a bundle of nerves" when she came into the hospital where I worked. She had been unable to fully grieve the death of a close friend and had become housebound from the ensuing development of panic attacks. Her doctor had put her on sedatives, to which she had become addicted. Over time, she became increasingly despondent and dysfunctional, and at the time of hospitalization she was feeling that suicide was her only option. Since she was already on sedative and antidepressant medicines, which were not effectively eliminating her symptoms, I discussed a few "alternative" strategies with her, which she was quite eager to learn. In addition to my training in psychiatry, I am a qualified teacher of TM. I taught her the TM technique, along with a few other Ayurvedic therapies such as nutritional counseling, recommendations for her daily routine, and neurorespiratoryl neuromuscular integration techniques (breathing techniques and yoga postures) (Averbach & Rothenberg, 1989; Glaser, 1989). Within 10 days of this natural, nonpharmacological approach, Susan was well enough to go home. She was no longer depressed, but was instead seen to be frequently smiling and more positive in her outlook. She was no longer experiencing panic attacks and was making progress with her agoraphobia. She had cut down on the regular use of sedatives to only periodic usage on an "as needed" basis.

What happened? How could such a dramatic transformation occur in so short a time? Basically, the TM technique enabled Susan to experience, on a regular basis, her innermost Self-pure consciousness. The other Ayurvedic strategies created balance in mind and body, which supported this experience. Very quickly she began to describe a welling up of inner calm and joy from within. This resulted in a lessening of her worries and fears and new zest for life. At her 8-month follow-up, she continued to show improvement in all of her symptoms.

A second factor seen by Ayurveda to be causative in the development of psychiatric conditions takes more of a physiological perspective. This ancient knowledge of Ayurveda includes a very complete and practical understanding of human physiology. In Ayurveda, three basic underlying metabolic principles govern the human physiology (as well as the physiology of the animal and plant kingdoms). These three organizational principles are called Vata, Pitta, and Kapha (Averbach **&** Rothenberg, 1989). Vata represents the principle of movement in the physiology and is responsible for the functioning of the nervous system and the flow of the circulatory and digestive system. Pitta is responsible for digestion and metabolism, and Kapha is responsible for the structure and fluid balance of the body. All of the modern, scientific understandings of the body's composition and function can be organized according to these three principles.

There are several advantages to categorizing the physiology according to Vata, Pitta, and Kapha. Firstly, every individual can be categorized as one of 10 different psychophysiological constitutional types, based on the combination of these three elements, which are called "doshas." Once an individual's constitutional type (determined through a comprehensive history and physical examination, including a special Ayurvedic examination of the pulse) is determined, then it is possible to determine what types of food would promote balance in that individual. Also, both mental and physical ill health are seen as arising as a consequence of imbalances among the doshas. Thus, if there is some psychological or physiological imbalance present, herbal preparations, as well as other recommendations, can be prescribed that will restore balance for that given individual. For example, if an individual has primarily a Vata type of constitution, then if Vata increases or becomes "aggravated" in that individual, this may produce imbalances such as insomnia and anxiety. For such an individual, certain food types that reduce excess Vata in the system, such as warm and heavy foods having more of a sweet, sour, or salty taste, will be extremely helpful in reducing the symptoms. Also regular mild exercise, a daily warm oil massage, regular practice of TM, certain herbal preparations that are extremely effective in providing a soothing influence to the nervous system, and a variety of other behavioral recommendations will all serve to correct the anxiety and insomnia, because they treat not the symptoms themselves, but the underlying imbalances that are causing them.

An understanding of the principles of Vata, Pitta, and Kapha can be extremely practical in treating psychiatric disorders. Ed, for example, is a **45**-year-old male who presented with a diagnosis of major depression. From the Ayurvedic point of view, he had a Pitta type depression with his main complaint being extreme irritability (a sign of Pitta imbalance). Because he was against taking medications and wanted a natural treatment approach for his

depression, he was prescribed a Pitta-reducing regimen. This included a Pitta-reducing diet, which favors sweet, bitter, and astringent foods, and a reduction in salty, spicy, sour, and oily foods, an increase in milk and ghee (clarified butter), a herbal tea, milk shirodhara (a Pitta-reducing procedure in which a stream of milk treated with special herbs is poured across the forehead for 30-40 minutes), a breathing technique known in Ayurveda to have a cooling effect on the mind, and TM (which provides mental calmness and reduces irritability). At his next appointment 10 days later, Ed was much more relaxed, was cheerful (less depressed), and reported a significant reduction in his anger outbursts at home and at work. In Ed's case, no medication was needed. In some more resistant cases, however, a combination of antidepressant medication along with Ayurvedic recommendations might be the best approach.

Ayurvedic treatments can often, however, be administered without having to resort to modem drugs, which may have a tendency to have harmful and unwanted side effects. This simple and yet profound system for understanding the human physiology is easy to learn, for both the physician and patient, and it gives the psychiatric or substance-abusing patient a tremendous sense of control over his or her own health and destiny.

In my clinical experience, patients greatly appreciate this simple but elegant psychophysiological approach to treating their psychiatric condition because they have a sense of truly understanding what is wrong and also have the opportunity to be intimately involved in their own recovery. Many of the therapies of modem psychiatry, including psychotherapy and medication, often have the unwanted side effect of fostering dependency and a sense of lack of control over one's own healing process. The advantage of a Western-trained physician who is also trained in Ayurveda is that he or she can use an integrated approach, emphasizing natural treatment methods. If necessary, however, he or she can add Western medical approaches in an adjunctive fashion. In this way, patients truly get the best of both worlds.

The third way of treating mental illness in Ayurveda is through behavior. Of course, behavioral approaches have become increasingly popular in modern psychology and psychiatry. Ayurveda provides an expanded understanding of human behavior that is quite useful in both treating as well as preventing mental and emotional imbalance. This refers to a principle known as violation of natural law. Basically this is the idea that we create much of our own misery by failing to think and act in accord with the laws of nature that govern human life and the environment. In medicine, this idea is becoming not only well known but also substantiated scientifically. For example, such disorders as lung and throat cancer, heart disease, strokes, and hypertension, as well as auto accidents, homicides, and suicides are related

to cigarette smoking or alcohol consumption. These behaviors are clearly not life supporting and thus are not in accord with the natural laws that uphold the health of the body. Ayurveda, particularly MVM, not only recognizes this idea but also, more important, provides a methodology for reducing and ultimately eliminating the tendency to violate natural law. In order to behave in such a manner as to prevent harming oneself or others, it recommends procedures that help individuals to become physically and mentally well; thus, they have less of a tendency to behave in ways that may produce harm to themselves or others. In other words, behaviors that result in self-harm often are the consequence of having an inner feeling of discomfort, emptiness, or unhappiness. The individual wants to "feel better," at least temporarily. Thus, improper diet, too little or too much exercise, smoking, drinking, drug abuse, etc. will be significantly reduced if a person can find a healthier means to promote mental and physical well-being. This may sound simple, but having practical tools to increase one's inner sense of happiness and wellness, as well as techniques to enhance one's ability to be more successful in one's daily activities, naturally reduces the likelihood that an individual will have to rely on behaviors that temporarily enhance well-being but ultimately result in a worsening of psychological and physiological health. Each of the approaches of MVM serves in a natural way to greatly enhance one's sense of self, and scientific research clearly demonstrates improvements in both psychological and physiological health (Nidich & Seeman, 1972).

The fourth factor seen to be causative in mental illness and addictive behaviors is environmental influences. The environment in which we live definitely plays a role in our daily life. It is obvious, for example, that a loving, nurturing family environment does a lot more to foster normal human development than one in which parents and/or siblings are hostile, judgmental, and stressed.

MVM suggests that it is possible for us to improve our environment from two perspectives. The first states that although it may be difficult to change another person's behavior, we can certainly change our own. If a person is improving his or her physical and mental well-being with daily use of Ayurvedic techniques, he or she can often step out of the vicious cycle of blame that is often seen in unhealthy relationships. When we improve ourselves, we are more capable of relating to others in a supportive and empathic manner. This often can go a long way to reverse negative trends and tendencies that we formerly viewed as unchangeable in relationships.

Secondly, MVM notes that even though on the surface we appear separate from one another, on the deepest level of our mind we are intimately connected with those around us. Pure consciousness, the basic field underlying

all existence, lies at the deepest level of one's own personality. Thus, universality is basic to our nature, and therefore we are all connected on this fundamental level of human experience. This phenomenon on the level of human experience has parallels to modern theories of quantum physics.

In quantum field theory, physicists have shown mathematically that there is an underlying unified field of nature, which has the property of being unmanifest (silent) but nonetheless gives rise to everything that is manifest in the physical universe. This unified field is the basis and the cause of everything in nature, according to physics. Because it has the property of infinite correlation, the integrating factor maintains orderliness in nature.

Some physicists (Hagelin, 1987) have postulated that the unified field of natural law is the field of pure consciousness, and that therefore humans have the unique characteristic of being able to experience the unified field. This would explain how we might be able to influence holistically not only our entire physiology, but also our surrounding environment, through the procedure of contacting and enlivening the unified field of pure consciousness deep within us. Because of this infinite correlation value of pure consciousness, if we enliven this field through both individual practice and especially through the group practice of TM, it is possible to influence our environment significantly in the direction of greater peacefulness and positivity. It is interesting to note that extensive published scientific research (e.g., Dillbeck, Cavanaugh, Glenn, Orme-Johnson, and Mittlefehldt, 1987; Dillbeck & Landrith, 1981; Orme-Johnson, 1988; Orme-Johnson, Gelderloos, & Dillbeck, 1988) indicates that the group practice of TM and the advanced TM-Sidhi program result in a reduction of crime, accidents, sickness, and suicides in society.

III. ISSUES OF SAFETY, COMPATABILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATIONS

The issue of safety involves applying a method of treatment without creating an imbalance anywhere in the system. For example, when the active ingredient is separated from a plant, although it can be extremely effective in treating a specific condition, it often creates unwanted side effects elsewhere in the system. An example of this is the drug reserpine, which contains the active ingredient of the herb rauwolfia serpentina. In both allopathy and Ayurveda, rauwolfia serpentina has been used to treat cardiovascular and psychiatric disorders. Where Ayurveda uses the whole root of the plant, allopathy extracts the active ingredient from the plant. The allopathic preparation has many side effects (hypotension, depression, impotence, etc.), whereas the Ayurvedic preparation is much safer, with few or

no side effects. Typically, Ayurvedic preparations contain mixtures of herbs that have the dual effect of being synergistic and protecting against any potential side effects. It is important to note that herbal preparations may have side effects (although usually mild) if not prepared and prescribed according to specific guidelines laid out in the ancient Vedic texts. It is recommended, therefore, that one consult with a physician who has knowledge and training in this area.

It is also important to use herbal preparations that conform to high quality assurance standards in terms of ingredients and lack of contamination to ensure efficacy and potency. It's a good idea to check the label, and, ideally, get in touch with the company processing and preparing the herbs to be sure the highest standards are being applied.

Herbal preparations usually take time to improve a condition, but the effects tend to be more lasting. They promote nutritional balance in the specific area of concern, while at the same time enhancing the functioning of the body's immune system (Bevan, 1977). This results not only in symptom relief, but also in strengthening the system as a whole.

For this reason, herbal preparations generally tend to be complementary to allopathic medicines. For example, I have had very good clinical results in treating anxiety disorders combining Gotu Kola with SSRIs. I can often avoid using benzodiazopines with this combination. At times they may even mitigate against their side effects. For example, Sharma, Sands, and Nidich (1993) found that the herbal mixture Maharishi Amrit Kalash was highly effective in reducing the cardiotoxic side effects of the antineoplastic drug adriamycin.

Since herbal preparations and allopathic medicines sometimes share related ingredients or induce the same neuro-transmitters (e.g., St. John's wort and SSRIs), it is helpful when the prescribing physician has knowledge of both herbal and allopathic pharmacology.

In my experience, many patients appreciate the opportunity to take a natural preparation as part of their treatment regimen. They often are able to take a lower dosage of the allopathic medicine, which lessens the risk of side effects. Furthermore, I have found that often a holistic Ayurvedic approach (herbs, purification procedures ["Panchakarma"], music therapy, aroma therapy, meditation, yoga, etc.) allows patients to do well without the need for any allopathic medicine.

IV. SCIENTIFIC RESEARCH ON AYURVEDA

The research on Ayurveda, particularly Maharishi Vedic Medicine, is extensive, with a rating scale of 6. Since the early 1970s, research on

Ayurvedic modalities started to appear in Western literature. Most of these (about 600) studies have been on MVM, beginning with Dr. Keith Wallace's landmark publication in the *American Journal of Physiology* (1971). In that study, Dr. Wallace demonstrated that through a mental technique (TM), there was a spontaneous reduction of pulse, blood pressure, oxygen consumption (to a level twice as low as occurs during sleep), and lactic acid level, and there was a rise in skin resistance. This experience was described as a state of "restful alertness," a "fourth state of consciousness," physiologically different from waking, dreaming, or sleeping. Another pivotal study was done by Banquet (1973), which revealed that the EEG of TM meditators showed a distinct pattern of brain wave coherence. The longer the person was practicing TM, the higher was the degree of coherence.

Subsequently, numerous studies have been published on the benefits of MVM, both in the area of disease prevention and treatment and in the area of promotion of mental health and higher states of consciousness. Sharma (1993) studied the effect of the herbal mixture Maharishi Amrit Kalash on depression and found that there was a significant drop in Beck Depression Inventory scores. Glueck and Stroebel (1975) studied psychiatric inpatients at the Institute of Living in Hartford, Connecticut. They found that TM was more effective than biofeedback and progressive relaxation in the treatment of a wide variety of psychiatric disorders, including depression, anxiety, psychosis, and personality disorders. Eppley, Abrams, and Shear (1989), in a meta-analysis comparing TM to other relaxation and meditation techniques, found TM to be about twice as effective in reducing anxiety. Schneider (1985) found that Panchakarma, the purification therapy of Ayurveda, reduced anxiety and depression and increased feelings of vitality and well-being. Gelderloos and Walton (1990) published a summary article in which they revieved 24 studies showing that TM reduced the use of narcotics, barbiturates, alcohol, cigarettes, marijuana, and other psychoactive substances. Brooks and Scarano (1986) found that TM was superior to psychotherapy in the treatment of post-traumatic stress disorder. Several studies in prison settings (Bleick, 1987) found that MVM was effective in criminal rehabilitation. These studies showed improved psychological traits (e.g., increased empathy and improved moral reasoning) and decreased recidivism, compared with matched controls. Wallace and Dillbeck (1982) demonstrated that the biological age of TM meditators was more than 5 years lower, on average, compared with matched controls. Alexander (1989) found that TM increased longevity and cognitive flexibility in nursing home patients. Orme-Johnson (1988) found that there was 30% less utilization of psychiatric inpatient services, and >50% less utilization of outpatient services in TM practitioners compared with matched controls. There have been several NIH funded studies on stress reduction for

the treatment of hypertension in elderly African-Americans (Schneider ***et al.,*** 1995).

In addition to the research done in the West, about 400 research papers on Ayurveda have been published in India. Although most describe treatment of medical conditions, some describe the benefits of Ayurvedic herbs in treating psychiatric conditions. For example, Shukla (1979) described the use of the herb Shankhapuspi in the treatment of anxiety, depression, and psychosis.

V. AYURVEDA IN CLINICAL PRACTICE

This section describes the clinical applications of Ayurveda, especially MVM, in the field of mental health. In the United States and many other countries, many mental health professionals are incorporating these modalities into their practices. I have been applying these natural approaches in my clinical practice for the past 20 years.

A. THE AYURVEDIC APPROACH TO DEPRESSION

Major depression is one of the more common psychiatric conditions, with approximately 15-20% of the population afflicted at some point in their lifetimes. This condition is characterized by a sad or irritable mood, difficulty sleeping, poor or increased appetite, and decreased ambition. It is associated with a 15% mortality rate due to suicide. This condition is usually treated with a combination of antidepressant medication and psychotherapy. Often chronic stress is a contributing factor to this condition, and often there is a genetic predisposition. Due to significant side effects from medications and a high recurrence rate, the mental health profession is looking for more effective ways of treating this condition.

Scientific research has demonstrated that herbal preparations (Sharma, 1991), purification procedures (Schneider, 1985), including shirodhara (an ancient treatment for mental conditions that involves pouring herbalized oil and other natural substances, as described earlier, across the forehead) and TM (Brooks & Scarano, 1986), are all helpful in treating depression. These treatments are correlated with physiological changes, including EEG coherence (Banquet, 1973), serum cortisol (Jevning, 1975), endogenous endorphin production (Sharma, 1988), and endogenous imipramine receptor binding (Sharma, 1988). Also, psychological factors such as stress reduction, increased inner contentment associated with enhanced self-esteem, and increased energy (Nidich & Seeman, 1972) all contribute to the alleviation of depression.

A patient of mine, a nurse who is married with two children, presented with severe symptoms of major depression that made her unable to function at work or at home. She was extremely suicidal. She was given a trial of antidepressant medication in the hospital, but due to side effects, she was unable to tolerate an effective dose. She was prescribed TM, and within a few days she had a significant improvement in her depression to the point where she was able to leave the hospital. One interesting sideline to this case is that this patient previously was "stuck" in her therapy sessions. She was unable to look at some difficult issues related to early childhood abuse. After learning to meditate, she had more self-confidence and therefore was able to face many difficulties in her life that she had been unable to confront before. This brings out a very important point. Techniques of Ayurveda, which include meditation, diet, herbal preparations, purification treatments, recommendations for daily routine, taste and aroma therapies, etc., all act in a holistic and synergistic way. These treatments enhance the benefits of other more contemporary treatment modalities such as psychotherapy.

B. THE AYURVEDIC APPROACH TO ANXIETY

According to Ayurveda, the root cause of anxiety is becoming disconnected from our deepest self, which is said to be a field of bliss or great contentment. When we are in tune with our inner self, we feel at peace. When we are out of touch with it, we start to feel restless and look outside of ourselves for happiness. When this happens, we lose the ability to live in the present and enjoy it. We worry about the future, or we are gripped by our past and cannot let go of it. In post-traumatic stress disorder (Brooks & Scarano, 1986), for example, a person is haunted by memories and impressions from painful events in the past. Many Vietnam veterans returned home only to find their lives shadowed for decades by horrible memories of the war. In phobic disorders, people become afraid that the future will bring some some terrible negative outcome. In both these conditions, enjoyment of the present is sacrificed.

The same is true of less extreme everyday anxieties. We worry about the future. How will it work out? What will I do? What will he say? We see a thousand opportunities for failure, loss, and difficulty. Or we play mental and emotional reruns of past experiences. The most effective solution to anxiety is to reconnect with our inner selves through quiet meditation.

Miriam was a notorious worrier. Her children as well as her friends repeatedly tried to point out to her that things never turned out as badly as she imagined they would, but their words had little effect. She was always worried about something or other, and the older she got the worse it became.

She frequently lost sleep over her worries and ended up with a prescription for sleeping pills and another for Valium that she could take when the anxiety became really overwhelming. She went to her local doctor, who happened to have been trained in MVM. After evaluating her body type, the doctor said, "Worry and anxiety are essentially a disorder of Vata."

Miriam tended to eat very lightly, mostly salads and dried fruits, which increase Vata. She also stayed up too late, watching stimulating television shows, and tended to overdo it when she exercised, all of which are Vata-increasing behaviors. These factors, along with the fact that she was predisposed to Vata disorders due to being a Vata constitutional type, were clear contributers to her anxiety disorder.

The doctor prescribed a Vata-balancing regimen for Miriam, including the Vata-pacifying diet and a daily oil massage. He also suggested a soothing aroma to diffuse in her apartment. He advised her to be in bed by 10 p.m. and to rub her feet for 5 minutes with sesame oil if she had trouble falling asleep. Making these changes over time, Miriam's anxiety symptoms significantly decreased. And her life became more relaxed and enjoyable. There are many other Ayurvedic prescriptions for anxiety, but even these few common sense, natural recommendations enabled Miriam to experience a freedom from worry that she had not felt in years.

C. AYURVEDA AND ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

One of the most rewarding clinical successes of my professional career occurred when I worked in an inpatient setting with young adolescents, many of whom had a diagnosis of ADHD. A number of the parents were not happy with the allopathic treatments, but, for lack of a better alternative, for years had their kids on psychostimulants. When I offered the option of a natural approach to treating ADHD, both the parents and their kids were quite interested. Teaching the TM technique to these youngsters was really an eye opener. First, it was very easy for them to learn and practice the technique. Second, the calming effect of their meditations was profound. Several of these patients were able to lower the dosage, and a few were able to go off their medicines. The increased ability to concentrate and focus enabled them to improve in their schoolwork, which in turn enhanced their self-esteem. This, in time, diminished some of their negative, attention-seeking behaviors.

There are a few important side notes to this experience. First, the peer group for adolescents is such a critical factor. As long as these kids saw that

practicing meditation was "cool," they were motivated to continue their practice. Also, when the parents chose to learn about (or practice for themselves) Ayurvedic therapies, they were able to be much more encouraging and appreciative of their children's involvement in the program, which enhanced compliance. Based on the dramatic nature of improvement in this patient population, I believe conducting more formal research would be quite important. I have also found that several herbal preparations are effective when used in conjunction with meditation in treating ADHD. An example is a herbal preparation that contains a combination including Brahmi (related to gotu-kola), winter cherry, Indian asparagus, jatamamsi, and aloeweed.

D. ADDICTIONS AND AYURVEDA

Substance abuse is a continuing epidemic in the United States and indeed throughout the Western world. The treatments used thus far have proven largely ineffective. Certainly, criminalizing the process and spending billions of dollars incarcerating people who have addiction problems does not help and in many cases makes the problem worse. For those who can relate to its philosophy and religious bent, programs like Alcoholics Anonymous and Narcotics Anonymous can be helpful in supporting individuals in their endeavor to remain sober. New medicines can help reduce alcohol cravings. However, the highly addictive nature of cocaine, heroin, alcohol, and even nicotine makes maintaining sobriety very difficult for many.

What is missing from our current treatment strategy and public health policy is the concept of introducing a competitive healthy alternative to the substance being abused. Methadone is a competitive strategy for replacing heroin, but it is not the healthiest way to go about it, due to a variety of side effects, including substituting one drug dependency for another. It would be better to have a cost-effective way to experience inner well-being and happiness, which is enjoyable enough to out-compete the experience of drug use. After all, many people use drugs or alcohol to fill some void in their lives. Perhaps, due to lack of proper education, they have not learned how to, at will, generate a feeling of inner comfort, eliminate fatigue, and feel fresh, alert, and happy all in one stroke.

MVM strategies, especially TM and some of the body purification techniques like shirodhara, over time naturally replace the urge to use drugs. With regular exposure to one's own creativity, intelligence, and bliss, the need to feel better through external substances diminishes.

Dr. Charles Alexander (Alexander ***et al.,*** 1994) described a study involving a meta-analysis of 19 published studies comparing TM and MVM

to the other modalities in the treatment of polysubstance abuse. He found that substance usage was consistently reduced in association with (1) total length of time practicing TM and (2) the regularity of the practice each day. MVM was found to be significantly more effective than other modalities (including biofeedback, karate, psychotherapy, and other relaxation techniques) in spontaneously reducing the use of cannabis, cigarettes, alcohol, hallucinogens, and narcotics.

One case example is that of Ralph, a 40-year-old male attorney who suffered from a variety of addictions, including narcotics, amphetamines, and minor tranquilizers. He had been struggling off and on for years, unsuccessfully, to get off these substances. With a combination of MVM therapies, including herbal preparations, TM, dietary recommendations according to his constitutional type, music therapy, etc., he has been able to stop using drugs altogether. In his words:

> Having been a polysubstance abuser for the last 20 years, I was nearly ready to give up and simply maintain a crippled lifestyle. I had studied TM in the 1970s, but my drug use had all but precluded its use in my daily life. After some prompting from my MVM-oriented physician, I began twice-daily meditation. Any attempt at describing the positive effects would be minimizing. It has been the only competing approach to altered consciousness that has been effective against the tremendous anxiety and craving produced by the drug withdrawal I have had to endure. After 20 minutes of meditation, I become relaxed and focused. It seems almost impossible that its effect can be so valuable. My aftercare plan's foundation is the inclusion of this most useful tool. I would recommend its use unconditionally for those who suffer, as well as those who are healthy but simply want to greatly improve their lives.

In summary, Ayurveda has many practical applications to the field of mental health. The theoretical underpinnings are sound and simple to understand, and the clinical application of the principles provides a significant contribution to the treatment modalities that we currently have in place in contemporary practice.

VI. TRIAGE: TRAINING, CERTIFICATION, AND HOW TO RECOGNIZE A QUALIFIED PROVIDER

There are about 100 Ayurvedic colleges in India, and a number of their graduates reside and practice in the United States. Western-trained physicians have a choice of several Ayurvedic training programs in the United States. If a physician is interested in studying Ayurveda or referring a patient for treatment, I'd recommend evaluating any particular program in terms of the following: (1) the training and experience of the physicians and staff, (2) how much research has been done demonstrating its safety and effectiveness, and

(3) positive and negative feedback obtained from colleagues and patients who have been through the treatment program.

My personal preference is the MVM program, which satisfies all three of these criteria. For those interested in this approach, training is available in several locales around the United States, including Atlanta, Albuquerque, Chicago, Boone (North Carolina), Palo Alto, Dallas, and Boston. These courses can be taken over a series of weekends. Also, for physicians and non-physicians, the Maharishi College of Vedic Medicine in Fairfield, Iowa, offers bachelors, masters, and PhD courses for training as an Ayurvedic practitioner.

VII. RESOURCES

A, PHONE NUMBERS AND WEB SITES

Maharishi College of Vedic Medicine, main campus, 1(800)472-7000.

Courses in Natural Medicine for Health Professionals, 1(888)349-8192; e-mail, Srothmd@aol.com.

B. RECOMMENDED READINGS

For an excellent description of the basic principles of MVM and how to apply them to clinical practice, see *Contemporary Ayuweda* (Sharma & Clark, 1998). Sharma and Clark, in chapter 8 of their book, have an excellent research review of the herbal pharmacopeia of mental disorders and of the "rasayanas," herbs known for their properties of enhancing immunity and promoting longevity. For a description of the application of MVM to specific psychiatric disorders, see *Ayuwedic Secrets to Longevity and Total Health,* (Brooks & Anselmo, 1996). For a detailed review of MVM in the treatment of substance abuse disorders, see *The Alcoholism Treatment Quarterly* (Volume 11, Numbers 3 and 4, 1994). For a concise review of the research on transcendental meditation, see *TM* (Roth, 1987).

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Chapter ***22***

The Creative Arts: What Role Do They Play?

John Graham-Pole, MD

I. INTRODUCTION

A. PHILOSOPHY

I am not unhappy, but unhappiness must have its say, and poetry is often the best means for this.

Mark Strand

Handbook of Complementary and Alternative Therapies in Mental Health

Holistic medicine's ancient, and reemerging, premise is that body, mind, and spirit are inseparable, in sickness and in health. This unifying principle challenges the 300-year-old dominant paradigm of Western medicine: that individuals and their illnesses can and should be dissected to their smallest separate elements to understand them totally and to treat them rationally. Although this evolution of Cartesian and Newtonian thought and experiment has brought society and its health a long way, in terms of both scientific discovery and treatment of established illness, mounting evidence points to its shortcomings (Cassell 1985; Charon ***et*** al., 1995; Hawkins, 1993; Pert, 1997). Exclusive focus on individual diseases has given us much detailed understanding and many specific therapies; but it has not lessened the prevalence of physical, psychological, or psychosomatic illness. The opposite is true.

The long-accepted but ill-founded categorizing of disease into either physical or psychological based on its origins and manifestations also has built-in limitations, both to unraveling the roots of illness and to creating innovative treatment and prevention. Our modern epidemics of addiction, AIDS, anxiety, cardiac disease, cancer, depression, and interpersonal violence are spawned by pollution and overconsumption and are prime examples of psychosomatic disease. Not only holistic principles but common observations dictate that the physical, psychological, and even spiritual elements of these diseases cannot and should not be separated. After all, these individual conditions often coexist-for example, AIDS and addiction, anxiety and heart disease, cancer and depression. Holistic medicine recognizes this, and in addressing the whole person and community avoids any such schism.

Nor is it any longer helpful, or correct, to divide those who give from those who receive care. This "them-and-us" posture arose because it offered caregivers the subconscious security that we could keep our distance from these illnesses and their sufferers, even as we tried to treat them. This is untenable today. AIDS, cancer, and cardiac disease touch each one of us; addiction, anxiety, and depression strike even nearer to home. How can the cared for and the caring find mutual relief and common cause in the face of these epidemics? A scribbled prescription for diltiazem or fluoxetine, clorazepate or methotrexate, does not suffice against the personal, collective, and existential pain of modern life that every one of us is heir to. What can we do, collectively and personally, with our anger, guilt, horror, and foreboding? How can we support and learn from each other? How can we turn negative energy into positive?

The expressive and creative arts have emerged, or reemerged, as a potent healing force that offers a direct response to such existential questions. Visual art, music, dance, drama, and the creative use of language all speak to

what John Keats, a graduate of London University medical school, called "the holiness of the heart's affection and the truth of the imagination" (Keats, 1817, in a personal communication to Benjamin Bailey). Each art form, singly and together, has proven a powerful antidote to all manner of psychological and psychosomatic illness. Most vital, art promotes the *health* of body, mind, and spirit; it is not concerned with disease, with *pathology.*

B. HISTORY

Unlike science, art does not by its nature *progress.* Its healing power has remained eternal and intact since our human origins, from long before the Ice Age, Chinese dynasties of *Shang* and *Hsia,* the pre-Columbian healing rituals of Native America, the European creation images of Lascaux, and right up to the present moment (Forge, 1979). Art, not just in its prehistoric but also in its preindustrial manifestations, never espoused the values of technical or economic progress that science has upheld in every civilization. Art does not move forward on a horizontal trajectory; it remains on a vertical axis that unites universal concepts.

Before language, we can surmise that human beings *conspired* (breathed) *with, were compassionate* (felt at one) *with,* all natural things (Samuels & Samuels, 1975). This is depicted in images throughout history that link body, mind, and spirit. Seeing with the eye of mind and spirit has always been a source of power and connection with nature and one another (Samuels & Samuels, 1975). It is only in the last half-millennium, and only in industrial nations, that this has gone largely unacknowledged. Shamanism, the oldest and most enduring of all professions, has always recognized art as the primal force of body, mind and spirit. It is a force that unifies and heals. Shamans were the precursors of physicians, psychologists, and priests. They continue today to practice their art on all five continents, as they have done from prehistory. Visualization-the deliberate creation of images-aided by dance and drum and chant, remain integral to shamanic healing practice, restoring health and harmony to both the individual and the community (McNiff, 1992). Such healing remains the staple of two-thirds of the world's population, in cultures that are arguably as healthy - psychologically, socially, environmentally, and spiritually-as Western cultures.

The healing power of art was considered self-evident in all societies up until the late Middle Ages. The 3000-year-old legacy of Asclepius did not separate the scientific from the spiritual in health care. The Asclepiads created temples throughout Greece and later the Roman Empire, both for worship and for restoring health. The two were not distinguished. Most notable

are the extant temples of Delphi and Epidaurus (Walton, 1894). Dreams, visualization, music, chant, and dance all served health and healing.

About 2000 years after the age of Pericles, Apollo's mortal son was adopted as patron of the Western medical profession. The two intertwined snakes of the caduceus represent the continuing dialectic between the inner and outer facets of our human experience. The Chinese have long termed these dualistic principles *yin* and *yang.* These are the elemental and essential territory of art and the artist. They are also the foundations of modern holistic medicine (Ivker & Zorensky, 1997; Miles, 1992).

At the outset of the previous millennium, Europe emerged from the Dark Ages to the era of holistic healers, exemplified by Maimonides and by St. Hildegard of Bingen. The Spanish physician Maimonides embraced holistic principles, including art and music, in his equilibrium theory (Freeman & Abrams, 1999). Both the medical and the musical works of the 80-year-old twelfth-century Rhineland abbess and mystic Hildegard have survived. She wrote works on holistic and natural medicine, music, poetry, and sociology. Her ***Book*** of *Divine* ***Works*** speaks to the persisting unity of art and science in the health care of the Middle Ages (Fox, 1987).

A continuous thread connecting holistic women healers from prehistory down to the present day has gradually been uncovered (Brooke, 1997; McClain, 1989). Under such leadership, nature, art, spirit, and health seemed once more unified. Three things then conspired, over the next 400 years, to dissociate art from science in medicine. First was the gradual evolution, over the first half of the last millennium, of words as tools for more precise communication-for questioning, analysis, and debate. Science (reasoned knowledge) and art (fruit of imagination) began to part ways. Over the past century, this separation has sometimes seemed destined to become permanently entrenched (Snow, 1959). Second were the European Inquisitions that spanned the twelfth through the fifteenth centuries. These suppressed all natural medical practices, particularly those of woman healers, as heretical. Third was the seventeenth-century Cartesian split of body from mind, making inherently inconsistent the concept of holism (Anscombe & Geach, 1971).

Descartes' philosophies anticipated the eighteenth-century Newtonian view of science as medicine's instrument for the machine that was the human body. Throughout the eighteenth and nineteenth centuries there was an enduring, although covert, rebellion against the linear rationality and empiricism of science's Age of Enlightenment, not just among the artists but also among the social scientists. These revolutionaries proclaimed a deeper, richer, and more comprehensive human experience; and they laid the groundwork for a reawakening in the mid-1800s of the widespread consciousness of the natural marriage of art and science in healing.

Florence Nightingale, the founder of modem nursing, was a crusader, both in London and the Crimea, for holistic approaches to patient care. She spoke eloquently to the role of art and nature in physical and psychological healing (Nightingale, 1859, as quoted by Senior & Croall, 1993). At the same time as Florence Nightingale was tending the sick and wounded in Sebastopol, French physiologist Claude Bernard in Paris was expounding his concept of the *Milieu Interieur,* anticipating the work of Walter Cannon and his student Hans Selye (Selye, 1978).

Together they evolved a theoretical model that reconnected emotional to physical health and that stood up to modern scientific experiment (Selye, 1946). This led directly to the current Western concept of body-mind medicine and to Robert Ader's coining in 1980 of the term *psychoneuroimmunology* (Ader, Felten, & Cohen, 1990). The mechanisms whereby the mind influences every bodily system, and vice versa, have since been elucidated with great precision (Pert, 1997).

II. RELEVANCE TO MENTAL HEALTH

A. EARLY EXPERIMENTS

Concurrent with this modem exposition of the intimate links between body and mind in health and disease came early experiments showing the direct effect of art and art making of every kind on mental and physical health (Cousins, 1981; Institute of Noetic Science, with William Poole, 1993; May, 1975; Samuels & Samuels, 1975). Health was increasingly recognized as a balanced relationship between body, mind, and environment (Howe & Loraine, 1973). Several lines of inquiry explored the opportunity for promoting psychological health and well-being through the arts. They had the common goal of empowering individuals and groups in their responses to their particular circumstances (Philipp, 1997).

Both quantitative and qualitative research methods have since been adapted to this task (Black, 1994; Yin, 1989). It has been helpful to supplement randomized clinical trials that study therapeutic or preventive interventions with qualitative evaluations that identify appropriate variables to measure, and that generate new hypotheses through interview, through observation of subjects and their activities, and through interpretation of arts-related materials and activities. The qualitative research framework can offer essential contributions to the quantitative experimental paradigm. Psychologist Kirk Schneider proposes at least three elements of the complementary potential of qualitative research: the generation of new hunches, hypotheses,

and speculations; the investigation of complex and longitudinal experiences; and the elaboration and deepening of existing experimental data (Schneider, 1998).

B. OVERVIEW OF MODERN RESEARCH

There are now definitive texts on the role of aesthetics, dance, drama, humor, journaling, music, poetry, and visual art in the treatment of most psychological and many physical illnesses (Fry & Salameh, Kaye & Blee, 1997; 1987; Malchiodi, 1999a; Pennebaker, 1990; Runco & Richards, 1997; Standley, 1991; Warren, 1984). These texts and their findings are only beginning to find their way into medical education and practice, perhaps because they are published mostly in the literature of their individual disciplines and rarely in mainstream medical journals. With the establishment of arts programs in most large hospitals in North America and Europe over the past 10 years, the role of the expressive arts therapies is becoming more widely acknowledged (Graham-Pole, 2000; Kaye & Blee, 1997; Samuels & Rockwood Lane, 1998). This is particularly true in medical centers that serve persons with psychological, psychosomatic, psychosocial, and psychospiritual illness.

III. SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, CONTRAINDICATIONS, AND RISK FACTORS

I have not witnessed nor read reports of adverse outcomes from either the passive or the active pursuit of the arts by many thousands of subjects suffering from diseases and disabilities of many kinds over the past 10 years. This includes the occupants of different inpatient and outpatient units in several hospitals; nursing homes; treatment facilities for those with specific physical, cognitive, or emotional needs; correction facilities; and support groups of many kinds gathered for various purposes.

There is certainly the potential for harmful effects, at least temporarily, since engagement in artistic pursuits may by its nature have potent psychological effects, as well as carrying the possibility of physical injury. Trained supervision is essential for any active engagement judged to have this potential for ill or disabled people. All art, dance, drama, music, poetry and expressive arts therapists who have received formal training must obtain state licensure and be initially supervised through internships. With the widespread growth of hospital- and community-based arts-health and arts-medicine programs, the potential for harmful effects probably increases,

because many artists work in places of health care without such licenses. It is essential that artists who do work with seriously ill or disabled people are fully trained in medical as well as art-related protocols and regulations and that they are initially supervised by recognized experts.

This subject is addressed further in Section VI. The organizations listed in Section VII can be contacted for detailed information about training, credentialing, and other requirements and safeguards. Readers interested in employing or working with artists who have not received formal training under the auspices of one of the national expressive arts therapy organizations are referred to three particular national organizations, namely the Society of Arts in Health Care, VSA arts, and the Center for Health Care Design.

IV. THE STATE OF THE RESEARCH

There have been many well-designed empirical studies of the expressive arts reported in the past 20 years. These include visual art and aesthetics of different kinds, dance, drama, humor and clowning, journaling, poetry and other forms of creative writing, and music and chant of many sorts. Extensive reviews are included in the following books: (general) Samuels and Lane (1998), Graham-Pole (2000), IONS (1993); (aesthetics) Adams (1999), Cooper-Marcus and Barnes (1999), Kaye and Blee (1997); (humor and clowning) Adams (1999), Cousins (1981), Fry and Salameh (1987); (language arts) Bolton (1999), Fox (1997), Levine (1976), Pennebaker (1995); (music) Campbell (1997), Lingerman (1995), Standley (1991); (performance arts) Emunah (1994), Warren (1984); (visual arts) Bertman (1999), Malchiodi (1999a, 1999b), McNiff (1998), Runco and Richards (1997). I refer the reader to these texts for detailed descriptions of hypotheses, subject selection, study design, outcome measures, internal and external validity, and positive and negative short-term and long-term outcomes. I describe here a selection of studies particularly relevant to psychological health.

A. AESTHETICS

A significant finding across environmental studies is that adults prefer natural landscape with water and vegetation to urban settings. They report less psychological stress and elevation of mood (Schroeder, 1995). Several aspects of nature, including birds, grass, flowers and trees, rocks and visible sky, all seem to contribute to this effect (Wilson, 1984). Specific architectural planning of aesthetic design in hospitals and other places of health care has

been shown unequivocally to alleviate anxiety and depression, as well as to hasten physical recovery from, for example, surgery and heart attacks (Hartig, Mang, & Evans, 1991; Ulrich, 1984; Ulrich, ***et*** al., 1991). Each of these studies examined the general hypothesis that deliberately designed and aesthetically uplifting and relaxing environments in health care facilities would have positive psychological and perhaps physical benefits. In each case, statistically significant outcomes upheld these hypotheses. It seems inescapable that both internal and external health care environments should be systematically designed based on established empirical evidence of their profound psychological and physiological benefits.

B. DANCE AND DRAMA

The disciplines of performance art, particularly dance and drama therapy, have emerged in the past 20 years as therapeutic developments of mainstream psychology and psychiatry. Through their application to settings ranging from psychiatric inpatient units to psychosocial rehabilitation, self-help, and support groups, they have been shown to broaden and deepen the psychotherapeutic process. The use of dramatic performance, spontaneous dance and movement, and the deliberate application of psychodynamic process have been shown in several studies to facilitate trapped emotional expression, to enhance self-esteem, self-understanding, and self-acceptance, to give insights into and resolution of past traumatic events, to broaden perspective and empathy, and to heighten a sense of shared humanity. The mechanisms of such beneficial effects have been less thoroughly researched, but are probably mediated by similar pathways as are humor, play, and music (as discussed later).

It is a common observation that watching a dramatic play or film can have profound and often lasting effects on our psychological state. The disciplines of dance and drama therapy have as an integrative theoretical and practical framework the exploration of the psychological and physiological effects of active participation in acting, movement, and spontaneous play (Blatner, 1988; Emunah, 1994; Leste & Rust, 1984). These disciplines are typically process rather than product oriented; they are also aimed at deepening understanding and flexibility in relation to each patient's or client's specific dilemma and its resolution. They therefore lend themselves to qualitative rather than quantitative research.

Broadly speaking, research studies can be separated into the more frequent use of dance and drama therapies and rituals in groups and group interaction, and work with individual clients, for example, with psychodrama. Each, how-

ever, works essentially through psychoanalytic and psychodynamic theory to express and resolve repressed feelings and unresolved or unconscious memories and to achieve greater self-actualization, spontaneity, humor, and empathy. Examples of excellent research contributions are Blatner (1988), Emunah (1994), Johnson (1991), and Kipper (1986).

C. HUMOR AND CLOWNING

The research literature on the therapeutic benefits of humor and laughter dates from Freud's observations on the relationship of humor to the unconscious (Freud, 1964). Subsequent quantitative research studies have shown that deliberately induced laughter, when practiced consistently, significantly relaxes emotional tension, lessens anxiety, and has a sustained lessening effect on depression, as well as inducing analgesia and having beneficial cardiovascular effects (Cousins, 1979; Holland, 1982; Levine, 1976). These clinical findings have been supported by the demonstration of physiological changes after sustained laughter, notably a rise in salivary IgA, helper-T cells, and endorphin levels, and a lowering of catecholamine and corticosteroid secretion (Berk, Tan, & Fry, 1989; Lefcourt & Davidson-Katz, 1990; Pert, 1997).

D. Music

The psychotherapeutic effects of music are being addressed in a separate chapter in this volume. Briefly, music therapy is the longest established of the modem disciplines of expressive arts therapy. Definitive texts include ***Sound Medicine: Healing with Music, Voice and Song*** (Garfield, 1987), ***The Healing Energies of Music*** (Lingerman, 1995), and ***The Mozart*** *Effect* (Campbell, 1997), Lingerman's book provides a particularly comprehensive catalog of the effects of many forms of music on different aspects of health and well-being.

The National Association of Music Therapists was formed in 1950, and a more comprehensive organization, the American Music Therapy Association, was formed in 1998. The music therapists have led the way in rigorous clinical research into the benefits of external and self-generated music of all kinds on psychological and physical health. These effects include elevation of mood, relaxation and relief of anxiety, improved cognitive function, social integration, and higher pain tolerance (Clair, 1996; Guzetta, 1989, Standley, 1991; Wheeler, 1985). The mechanisms of these effects appear to

be primarily diversion and entrainment, or the attunement of the body's and mind's physiology to the rhythm and energy of music. For example, emotional arousal is directly related to musical tempo and rhythm. Several aspects of immune function are enhanced by appropriate musical sounds and rhythms, including elevation of natural killer cells and interleukin levels and release of endorphin neuropeptides.

E, LANGUAGE ARTS AND CREATIVE WRITING

Medical humanities, the discipline of literature and medicine, has grown rapidly in the past two decades (Charon ***et al.,*** 1995). The reason is its relevance to understanding the subjective aspects of illness, which in turn enhances diagnostic precision and therapeutic efficacy, deepens the patient-physician encounter and partnership, and heightens awareness of powerful ethical and other implications of medical practice. Works of literature are unsurpassed in their ability to teach about suffering, death, and the many facets of the human condition. They represent a durable body of qualitative research (Coulehan, 1992).

More than a decade ago, psychiatrist David Spiegel published his findings on the longer life span after a diagnosis of metastatic breast cancer that resulted from the patients' simply telling their story over and over (Spiegel, Bloom, Kraemer, & Gottheil, 1989). The research of psychologist James Pennebaker has led the field in demonstrating the therapeutic effects of journaling and creative writing on psychological and physical health (Pennebaker, 1995, 1997). Studying large numbers of both overtly healthy subjects and those with specific psychological and physical illnesses, Pennebaker and his colleagues have shown in a series of controlled experiments that journaling for specific time periods about emotionally traumatic and anxiety-provoking events enhances cognitive functioning and creativity, and has ameliorating effects on anxiety, depression, and post-traumatic stress disorder (Pennebaker, 1993). Of especial interest, it also has statistically measurable benefits on the frequency and severity of several physical illnesses (Smyth, 1999). There is growing evidence that these effects are mediated by enhancement of several aspects of immune functioning (Pennebaker, Kiecolt-Glaser, & Glaser, 1988). Another form of creative writing, poetry, has also earned a place in psychotherapy. The field of poetry therapy has developed over the past 20 years as an outgrowth of traditional psychology and psychiatry (Fox, 1997). There is a growing consensus that both reading and writing poetry, even for those with no experience or training whatsoever,

helps the recognition and expression of painful feelings, as well as serving to provide a place of companionship and spiritual resource (DeMaria, 1982; Heller, 1987; Morrison, 1978).

F. VISUAL ARTS

The potent healing effects of creating visual images in the mind and on paper are now well recognized (Achterberg, 1985; Dienstfrey, 1974). The long-established effects of the placebo and the modern psychotherapeutic tool of biofeedback both rely on the mind's innate capacity to visualize internal processes associated with thought, relaxation, and creativity. The placebo effect is known to be mediated through endorphin release and works because it is symbolic of healing visualized or imagined (Frank & Frank, 1991). Biofeedback depends on the power of the patient's imagination to affect psychological and physiological changes within themselves and so bring them under conscious control (Olton & Noonberg, 1980). Biofeedback is most effective with those who have the most ability to fantasize and create images.

Definitive texts on the visual arts and healing include *Art-Based Research* (McNiff, 1998), *Medical Art Therapy with Adults* (Malchiodi, 1999a), and *Medical Art Therapy with Children* (Malchiodi, 1999b). The use of visual expression through art making seems to allow people to transcend their immediate experience of emotional and physical suffering and to bring about personal understanding and the resolution of problems (Wadeson, 1980). It taps into innate and universal qualities of the human psyche and is an important if not essential complement to medical treatment (Dissanayake, 1992).

Art therapists have mostly used qualitative studies based on phenomenological research methods (Betensky, 1987). This methodology is particularly suited to working with people with primarily psychological problems. Landgarten (1981) specifically avoided preexisting theoretical concepts in documenting the artistic expression of patients and their families with a wide variety of psychological conditions and developed 17 categories for research observation and data collection. Subsequently, Junge and Linesch (1993) have identified nine different areas for study, including quantitative, phenomenological, hermeneutic, and ethnographic research. From these and many other research studies we can conclude that the making of art and discussion of the finished images consistently helps patients and clients express subconscious feelings and thoughts, gain self-understanding, create order and purpose in their lives, and interact meaningfully with others in their environment (McNiff, 1998).

V. TREATMENT APPROACHES TO SPECIFIC ILLNESSES AND DISABILITIES

The following case studies are taken, in whole or in part, from the author's book, *Illness and the Art of Creative Self-Expression* (Graham-Pole, 2000), with the permission of the editor and publisher. They illustrate the use of several of the art forms described earlier by patients and caregivers in diverse situations.

A. STORYTELLING

"Hans is a 72-year-old German, a retired army supplies storekeeper, and a heart transplant survivor. He is also a survivor of the fire bombing that swept through many German cities toward the end of World War II; and he has never forgotten it. He remembers a bomb exploding over the heads of himself and his friends as children, and running out of the house as the roof caught fire. His family emigrated to the United States shortly after the war. He reckons he can deal with anything life throws at him after those wartime experiences. But he also knows how close to death he has come since."

> "Before I got my transplant," he recalls, "I had one foot in the grave. And there's no guarantee my new heart will last that long. They're in short supply too-there's always a waiting list a mile long. I don't know how they decide who gets the next one. Someone's got to die for us all to live."

He has to make frequent trips to the hospital for check-ups, along with many other transplant recipients who are on the same lifelong drugs to dampen their natural immunity and so prevent rejection of their donated hearts.

> I've always been a sociable guy, and I soon got to know a lot of the people coming to the same clinic. So I organized a regular get-together. We'd sit around the waiting room after we'd had our check-ups - two or three of us at first, but nowadays it can be as many as ten.
>
> At first we'd just talk about our illnesses and surgeries. Compare notes about the drugs we were on and the tests and all. But then we got into talking about our families and where we'd come from, old memories from our childhoods, things like that. The stories I've heard in the last year since I started this-I could have written half a dozen books.

I suggested to him that maybe that was exactly what he should do-write them down, and in no time he would have a book to show for this impromptu support group of storytellers that he has created.

1. Comment

Hans and his fellow patients awaiting the transplant of new hearts in order to survive outside of a cardiac intensive care unit learned instinctively that the art of group storytelling could provide ongoing mutual support and so serve as informal psychotherapy. In this they were echoing the work of Spiegel *et* al. (1989) with patients with advanced breast cancer. Their spontaneous initiative had the effect of *restoring* by *re-storying* their minds and spirits wherever they were failing. It seems probable from what has been reviewed already in this chapter that this regular activity of sharing stories also had beneficial effects on their physical health.

B. VISUAL ARTS

Brenda was a 42-year-old woman with aplastic anemia, a life-threatening illness that came on very suddenly. She described it this way: "It was as though I'd got up one morning, gone out of my house, and found myself in a strange country where no one spoke the same language as me." The choices of treatment were limited and the prognosis poor. Finding herself out of control of her life and health, the notion took hold of her to start painting.

> I woke up one morning out of a dream of myself picture-making as a little girl of about 6 years old. That's certainly the age I'd been feeling recently in my real life-as though I'd just entered first grade, a new and very scared kid on the block. With no experience, no fellow-sufferers, no savvy. Once the first horrors of the bone marrow tests and the blood draws, the antibiotics and transfusions, had slowed down a bit—had become more of a kind of background rhythm to my days, I suddenly found I'd got a lot of time for myself. Time for relaxing a little bit-for reflecting and daydreaming some. I was still getting bouts of feeling pretty crazy, but at least it didn't look as though I was going to die tomorrow. And I knew I couldn't do much if anything about what was going to happen in the future. So I just started to think about making the best of my day.

She was spending her days either in the clinic or overnight at the hospital. She started packing a sketchpad, paints, and brushes in her overnight bag for each visit. She knew nothing about painting technique, and she decided against learning anything about it. All she wanted was to just make colors on paper-great splotches and swirls and nameless shapes.

> It was comforting, sort of safe. I didn't have to explain it to anyone, I could just run away and hide with my paints and my paper. They were my friends. It was like I could tell them anything I was feeling and thinking. They didn't answer back, didn't give me bad news. didn't counsel me about what was best for me.

She made hundreds of these pictures, some brightly colored, some dark and somber.

> None of them had titles, and you could see whatever you wanted to in them. I didn't need to interpret them. They were just like a child's paintings, which was exactly what I wanted them to be like. Somehow, feeling like a 6-year-old again not only had its painful and scary side, but it was also kinda fun--once I got into it. Sometimes I'd feel guilty and worry about my husband, let alone the kids and my work at the office. But some part of me kept reasserting itself, telling me to just let go and let god.

1. Comment

Brenda is an example of an adult coming to terms with illness through visual art making. She was led to pick up paints that had been laid down 35 years before. She made no pretensions to talent or technique and actively denied any striving to make her paintings better. She definitely did not want to enter into extensive psychotherapy to figure out what they meant. Letting go of the need to achieve, or even to understand at an intellectual level, gives the ego a rest and is akin to meditation or prayer.

The link between Brenda's illness and her turning to art seems clear. Feeling like an unknowing 6-year-old child, her instincts prompted her to turn this to advantage. She never sought to explain or analyze her artwork; the process of making art spoke for itself. She discovered instinctively what was best for her to do to make sense of and take charge of her situation.

C. LANGUAGE ARTS

Curt started keeping a journal when he moved his 76-year-old mother into his house after his father died. A month after she moved in she started having memory lapses and episodes of confusion, particularly at night. Once he found her wandering down the middle of the street in her nightgown. The neurologist confirmed the diagnosis of Alzheimer's disease, with a rapid course. Curt was a single parent with a 17-year-old son and a **13**-year-old daughter living with him. He had a steady job but knew he needed help, which he would have to pay for, to keep his mother out of a nursing home.

> Things got pretty wild for a while, he told me. Myself and two other generations living in a small three-bedroom house, all more or less dependent on me for livelihood and attention. My children are great kids and help a lot, but I can't turn them into long-term babysitters for their grandma.

He could not afford a live-in nurse, and contemplated going half-time at work so he could spend more time with his mother. Although he had a lot of friends, he was reluctant to call on them. His journal became his live-in friend and ally.

> As my mom got progressively more unpredictable in her behavior, I took to sitting up with my journal after she and the kids were bedded down, sometimes into the small hours. I found myself kind of chatting with my journal, like an old army buddy. It was really comforting. I'd been dating occasionally up till then, but I didn't feel safe about leaving Mom alone, and I didn't feel like bringing dates home. Things were crowded enough already. And I guess I was embarrassed about her. She'd have bouts of swearing like a trooper, and she'd start taking her clothes off in the kitchen and so on.
>
> So I'd simply write. And write some more. Mostly without thinking much about the words I was putting down on the page. It was quite a scrawl-I didn't have to worry about anyone else reading it! Then I realized what my mind-my instincts—were up to: I-or they-were just wanting to get some perspective on things, and this seemed to be the best way to do it. To take stock of everything, and make plans on paper. More and more I found myself fishing up old memories of home, times with Mom and Dad and my younger brother. I'd gotten pretty lonely, and I'd often cry for a while over the good old days. I'm still pissed at my ex too, and I was having a bunch of trouble with her about how I was handling Matt. So my buddy, as I came to call him, was party to a lot of f-ing and b-ing about the whole set-up. I'd always been a pretty easy-going sort-I was amazed at all the rage and colorful language that was coming up. It felt pretty good actually.
>
> So I wrote a lot-filled a couple of loose notebooks in the first month or so after Mom moved in. Then I noticed after a few weeks that I'd started to feel a lot better. A whole lot calmer. I really looked forward to seeing my buddy each night. Almost like a date! I suppose a journal is a kind of love affair. All those confidences, sharing myself in a way I'd never done with anyone in 50-odd years. I used to be able to talk to Mom when I was a little kid, and even after I got to college-probably more than most sons and moms. So it was really sad that I couldn't get through to her any more about my stuff.
>
> I noticed I was able to settle down and sleep soundly afterwards, and I'd wake up feeling really relaxed. I was able to think much more clearly about things too. In a more problem-solving way. They say a good cry or a good tantrum clears your head. Well, this way of expressing myself certainly worked for me. In some ways I've been happier this past year than for a long time. I'm staying out of the bars, and I'm getting pretty close to the kids. I've managed to keep Mom at home, even though I know most folks-men anyway-would have given up and packed her off to some kind of facility a while back. I don't know how its going to end up, but I think I've done pretty damn well so far. And I really think my journal-buddy can take a lot of credit.

L **Comment**

The family members often have a harder time than chronically ill persons themselves. This is never more true than in the case of Alzheimer's disease, where a loved one's mind is failing progressively before your eyes. Watching such deterioration, whether physical or mental, carries a particularly painful burden of suffering. This is the legacy, for both the affected one and those near and dear, of chronic illness that progresses without relief. Many of these

patients and their families feel isolated from medical or social services. Curt's journal exemplifies the benefits of reflective and cathartic writing. It provided him with an ability to tap a resource within himself that provided mental clarity and helped him make sense of himself and his situation.

VI. TRIAGE: TRAINING, CERTIFICATION, AND RECOGNIZING A QUALIFIED PROVIDER

There are national organizations for all the major expressive arts therapies. They are listed in Section VII, and include the American Art Therapy Association, the American Music Therapy Association, the National Association of Poetry Therapy, the American Dance Therapy Association, the National Association of Drama Therapy, and the American Expressive Therapy Association. Similar organizations exist outside of the United States.

Each of these organizations runs nationally recognized advanced-degree programs, serves as the credentialing organization for national or state licensure, and maintains educational, professional, and ethical standards for its profession. There is also a growing number of university-based certification programs in disciplines related to the many aspects of art making and health. There are also several organizations that serve as resources for obtaining more information and locating experts in the fields of architecture, design, and arts administration in health care facilities of all kinds. These include the Center for Health Design, the Society for Arts and Healthcare, and Very Special Arts.

> *It is the whole of my being, Lord Christ, that you would have me give you, tree and fruit alike, thefinished work as well as the harnessed power, the opus together with the operation.*
> Teilhard de Chardin

VII. RESOURCES

American Art Therapy Association, Inc.
1202 Allanson Road
Mundelein, IL 60060
Phone: (888)290-0878
Website: www.arttherapy.org

American Association for Therapeutic Humor
4534 W. Butler Drive
Glendale, AZ 85302
Phone: (623)934-6068
Website: www.aath.org/home

American Dance Therapy Association
200 Century Plaza, Suite 108
Columbia, MD 21044
Phone: (310)997-4040
Website: www.ADTA.org

American Expressive Therapy Association
5 16 5th Avenue, Suite 507
New York, NY 10036
Phone: (212)575-1234

American Music Therapy Association
8455 Colesville Road, Suite 1000
Silver Springs, MD 20910
Phone: (301)589-3300
Website: www.musictherapy.org

Center for Health Design
3470 Mt. Diablo Boulevard
Lafayette, CA 94549
Phone: (925)299-3631
Website: www.healthdesign.org

International Arts Medicine Association
3600 Market Street
Philadelphia, PA 19104
Phone: (610)525-3784
Website: www.members.aol.com/iamaorg

National Association of Drama Therapy
19 Edwards Street
New Haven, CT 065 1 1
Phone:(203)498-15 15
Website: www.nadt.org

National Association for Poetry Therapy
5505 Connecticut Avenue, NW, Suite 280
Washington, DC 20015
Phone: (202)966-2536
Website: www.poetrytherapy.org

National Endowment for the Arts
1100 Pennsylvania Avenue, NW
Washington, DC, 20506
Phone: (202)682-5400
Website: www.arts.endow.gov

Society for Arts in Healthcare
1229 15th Street, NW
Washington, DC 20005
Phone: (202)244-8088
Website: www.societyartshealthcare.org

VSA Arts
1300 Connecticut Avenue, NW, Suite 700
Washington, DC 20036
Phone: (800)933-8721
Website: www.info@vsarts.org

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Chapter ***23***

The Environment

Barry A. Sultanoff, MD

I. INTRODUCTION/OVERVIEW

A. THE ENVIRONMENT: OUR LIVING CONTEXT

When the old plum tree blooms
the entire world
blooms.

Dogen (thirteenth century)

This chapter looks at the environment in which practitioner and client meet. We'll be considering this environmental milieu and its relevance to psychotherapy,

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particularly its impact on the therapeutic experience and outcome. As we shall see, the workplace environment not only affects the client; it also influences, for better or for worse, the practitioner's own health and well-being.

Our discussion will acknowledge the relevance of immediate environmental factors such as the personal "energy," or attitude, that the practitioner brings to the meeting; the quality of light, sound, and color that's present; the effects of disorganization and clutter; the beneficial impact of negative ions; and the health-destructive effects of electromagnetic radiation. We'll be taking a broader perspective, too, that transcends the physical boundaries of our office walls and looks beyond them-to a realm of unlimited possibility.

In this exploration, we'll find that "the environment" has both tangible and intangible aspects. There will be both "inner" and "outer" environments to consider. We'll discover that some facets of the environment can be measured by conventional standards, and others, because they are not part of the physical world as we generally define it, cannot.

Even as we focus on what is literally right in front of us, we'll endeavor to look beyond the minicapsule in which the practitioner-client interaction most obviously takes place. For, as the Zen philosopher Dogen affirms in the haiku verse that opens this chapter, the "old plum tree blooms" as part of "the entire world."

For the purposes of this discussion, that "old plum tree" can be taken to represent the dynamic core (the living heartbeat!) of our everyday work environment, evolving and growing in whatever tradition or style of practice we have adopted. This "old plum tree," which is our immediate work environment, is also a vital part of an "entire world" of much greater scope and consequence. This "bigger world out there" is the living context in which our own individual work takes place.

The outer world that we live and work in serves as a kind of mirror. Our personal values are inevitably reflected in whatever we choose to surround ourselves with. Thus, to bring congruency into our own lives and into the lives of our clients, we'll want to create, as best we can, environments that continually remind us-and everyone who comes there-of what's worth living for, of what really matters.

Our workplace can, at its best, embody and "announce" to the world with which we interface the healthiest, most coherent "message" about what we love and value. It can be a living affirmation of what we feel is important enough to embrace in our own lives-and to model for the clients we serve.

Our lives and our work are embedded in an unfathomable mystery. We are always ***interbeing,*** inextricably part of a vast web of interrelationship. Thus, we cannot help but be, in some inscrutable way, part of all environments, everywhere, as we participate (like it or not) in this universal dance of life.

B. AN EXPERIENTIAL GLIMPSE

Here's an experiential exercise drawn from Mark Nepo's ***The Book of Awakening.*** This exercise in imagining provides a glimpse of various aspects of the environment in which we live and work. It offers a broad perspective on life and a context from which we can draw some inspiration as we ponder the question of how to design a healing environment. I recommend that you try this exercise yourself. Later on, you may want to guide your clients in this same exploration.

First, take a moment to quiet yourself. Let your breathing be slow and easy. Relax. Settle into yourself. Then, as you feel ready, let your creative imagination come alive as you begin to . . .

- Imagine that what wakes in you now has lived forever, and that it wakes within a soft and resilient casing of tissue that will take you wherever you want, that you have these delicate surfaces through which to feel wind and see light and sense the spirit of everything else that has lived forever.
- Imagine that once awake you walk in a world where small creatures fly about your head and sing, where colorful, juicy things grow on trees. Imagine that you can eat what grows on trees, that you can eat what grows from dirt. Imagine that there is always water running nearby, that you can wash the tiredness from your face as often as you like.
- Imagine that once awake you live in a time where there are others you can talk to about this miracle of being alive, others you can laugh with and cry with, others you can love.
- Imagine you can open your eyes and dance in a world where water can fall from the sky, that you can open your throat and song can come from it, that you can find the sun and let it warm the flower of you into being.
- Now (slowly opening your eyes, if they have been closed) receive that it is all true, it is all here, it is all now. Take a moment just to sit with this feeling.

In fact, we do live in a world where time and space are virtually infinite, where clean air and water are available, birds sing, the wind blows, and wholesome food grows on trees and from deep within the earth. Our bodies and minds are indeed miraculous, and the world is abundant with others of our species with whom we can engage, if we wish to, in delightful and productive ways-in speech, song, and in silent communion.

This is our vision of ***what's possible to experience*** But, as we know so well, life is often quite different than this ideal scene. So, how do we go about creating an environment that is optimally healthy for all concerned?

II. **RELEVANCE FOR MENTAL HEALTH**

A. FOCUSED ATTENTION

Inevitably, our own presence is the "front line modality" of any therapeutic environment. When we meet with a client in whatever setting, ***we ourselves*** become the most significant factor in that client's experience. ***We*** are the world they encounter most immediately and most intimately. Our capacity to "be there," to be relaxed and alert, attentive with minimal distraction, and emotionally available will be crucial in supporting our intention to be of the highest service to our client.

The attitude of focused "open attention" is a potent transformational tool whose power must never be underestimated. Indeed, it is a rare and subtle gift. At its core is a quality of deep listening that the client may never have known or experienced before, either in the client's family of origin or in more recent adult relationships.

This mindful presence is the most fundamental, essential environment that a therapist can provide. It is practical and portable. It can be taken anywhere. In fact, with this quality of devoted presence included in the mix, a fruitful therapeutic encounter can occur in any setting-a professional office, a meadow near a gurgling stream, or even a prison cell.

It is an inescapable fact that as practitioner/therapist, you ***are*** the instrument. You are the tool through which change is effected in your client. By shaping yourself into a clear and loving instrument-a beautifully refined tool-for your client's transformation (and ultimately for your own), you become, by your very presence, the front-line optimal environment in which your client can heal.

This is conveyed, both subtly and more overtly, through the quality of your attention, the vibrancy of your energy, the refinement and clarity of your consciousness, and the depth and heart-fulness of your listening. This healing presence shines forth through your gaze and eye contact, the tone and timbre of your voice, your facial expression, muscle tone, and posture.

Through your ***be-ing,*** both physical and energetic, you can convey an attitude of focused, open attention that will facilitate deep healing. As you listen to the client's story with presence and humility, respecting that client's unique way of learning life's lessons, you make room for positive changes to occur. You clear an energetic pathway between his or her inner world and your own.

When the client knows that it is safe to "tell all," when he or she hears, sees, and feels that the therapist is both present (i.e., really "there") and welcoming, the natural response will be a shift toward availability and openness. There unfolds, then, a willingness for both members of the therapeutic team

to go deep-and together to explore potential avenues through which the client can heal beyond the pain of old wounds and the tyranny of limiting beliefs.

B. LIFE ENERGY

At first glance, it might seem odd to call the practitioner's own attitude, energy, and presence a "therapeutic modality." One's way of being is certainly not a technique or a therapeutic strategy, as such. However, as we have noted, the practitioner - and everything that he or she brings into the therapeutic process-is inescapably the most immediate and impactful environment that the client will encounter.

One name that we can give this quality of presence, which is inevitably our primary tool of the trade, is "life energy[7]'--or *chi* (pronounced *chee),* as it is called in Chinese medicine. (This life energy is also recognized, and has other names - prana, *Qi, bio-energy,* etc.—in other healing traditions.)

We are healthy when our chi is flowing in a balanced and harmonious way through the energy channels, or "meridians," of the body. The practice of acupuncture, for example, is based on the premise that the movement of chi is the central component of health and vitality. Thus, we will be most capable of offering our best when this balanced, harmonious flow of energy prevails. It is then that we can most easily and naturally provide the quality of attention that will be optimal for our clients.

As we will see, this chi not only flows within us, it circulates in the external environment as well. In fact, if we adopt this Eastern point of view, we'll soon recognize that chi flows through all places, everywhere. It animates all beings. It circulates throughout the entire universe, awakening it into aliveness.

C. BROADCASTING HEALTHY ENERGY

Relating this back to the context of the mental health practice, we see that one can create an environment of healing presence through the particular attitude and energy that he or she brings to the therapeutic encounter. This has traditionally been referred to as the therapeutic "set" (as distinguished from the "setting"). This therapeutic set is created by the particular way the practitioner is broadcasting or *be-ing,* while he or she is engaging the client.

One useful analogy is that of a radio transmitter. The practitioner, alive and vibrating with energy, continually broadcasts a "program" of mood, attitude,

and attention. This broadcast will inevitably occur, whether or not the practitioner is consciously aware of it.

This broadcast is the result of the practitioner's "energy field," vibrating in a particular manner. As Einstein affirmed in the mid-twentieth century, in his well-known equation $E = MC^2$, energy and matter are interchangeable. Wherever there is matter, there is always energy. So, wherever the practitioner may be physically, he or she is also broadcasting as energy.

III. SAFETY ISSUES

The environmental health strategies discussed in this chapter are completely safe. There is an important safety issue, however, regarding the potential health hazards of unwanted exposure to environmental pollutants, both chemical and electromagnetic.

Of particular concern is exposure to electromagnetic fields (EMF). This topic is thoroughly discussed, and the current research extensively referenced, in a monograph titled *BioElectromagnetics: Health Effects Update,* edited by James B. Beal (1998; see Resources).

Manufactured EMF was virtually nonexistent a century ago, so it was obviously not a human health issue then. However, in the twenty-first century we live in a global environment characterized by ever-increasing levels of EMF. Exposure to this EMF-saturated environment affects the health of human beings, both as acute exposure and as chronic immersion in low background levels.

The proliferation of cellular phones has compounded the dangers of cumulative exposure to EMF and its effects, in particular because these devices, in the way that they are typically used, are held in close proximity to the brain. Further studies are needed to elucidate the acute and long-term effects of cellular phone use and the effects of EMF in general on human health.

Worldwide proliferation in the use of personal computers, both at home and on the job, has also increased exposure to EMF, compounding the dangers of cumulative EMF exposure. A report released by The World Health Organization nearly 20 years ago noted that working in front of a computer screen impairs the body's capacity to cope with stress, thus rendering the individual more susceptible to illness.

The daily exposure to low background levels of EMF emanating from radio and television broadcasting towers and from cellular telephone networks is of increasing concern for human health. Radiation from cathode-ray tubes like those found in television and video games also contributes to EMF exposure, especially among our youth.

Individuals may vary in their sensitivity and susceptibility to EMF, but its deleterious effects on human health, including mental health, are quite real. One possible mechanism of action is the effect of EMF on the pineal-endocrine axis, in particular on the production of melatonin and serotonin. As melatonin is central to the regulation of sleep-wakefulness cycles and serotonin plays a crucial role in neurotransmission, the possible link between EMF and conditions such as insomnia, fatigue, and depression is difficult to ignore.

IV. TREATMENT APPROACHES

A. REVITALIZING THE WORK ENVIRONMENT

Let's have a look now at those factors in the external environment that are relevant in creating an environment in which optimal healing, both emotional and physical, can occur.

1. A Fertile Environment

The tradition of Western medicine in which I was educated emphasized the need for sterile environments-to prevent illness by minimizing the spread of infectious disease. Virtually no attention was given to the kind of healthy environment we might create for the patients whose health we sought to improve.

As twenty-first-century practitioners, we can redirect our attention and rearrange our priorities, balancing that traditional preoccupation with what we needed to prevent with a new, and I believe equally important, focus on what we want to create.

I like the term "fertile environment" to refer to the kind of healthy setting that we want to foster. This fertile environment will be, first and foremost, one in which the client can thrive. At its best it can be a sanctuary in which the client, having made the pilgrimage to the practitioner's doorstep, can feel welcomed and received, nurtured and supported.

We'll look now at some specific elements that can be brought into play in creating such a fertile environment. A diversity of health-promoting factors can be included and other health-destructive elements eliminated.

As pioneers of this new environmental medicine, we can learn to be pollinators of possibility, daring to go beyond conventional concepts of what an office "should" look and feel like. We can create, instead, imaginative fertile environments that are vital and alive-healthy settings in which the enjoyment of beauty can go hand in hand with compassionate healing.

2. Feng Shui Perspective on Natural Healing

One intriguing strategy for achieving optimal health through the creation of fertile environments draws on an ancient Chinese practice called feng shui (pronouncedfung shway). Virtually unknown to Westerners for centuries, this ancient healing art has reemerged in the West. It especially blossomed during the 1990s. Hundreds of books on the subject have now been published in English and in other languages (see Resources).

Feng shui, which literally means "wind and water," is based on the premise that humans and nature are intimately intertwined. To engage nature in the most balanced and salutatory ways, feng shui aligns itself with the healing power of natural elements such as sunlight, fresh air, and pure water.

Feng shui is based on the same principles as acupuncture and other Eastern practices such as akido, qigong, and tai chi. Its essential premise, which it shares with these Eastern practices, is that there exists everywhere in nature a vital energy, called chi. (We've already encountered this chi in our discussion of the practitioner-client relationship.) Chi animates all living beings. In the feng shui view, this vital energy is what brings all things to life; indeed, without chi life as we know it would not exist.

This life energy is present not only in animate objects; it flows through so-called inanimate objects as well, imbuing them with a particular quality of aliveness. In feng shui, the concept of "body-mind" pertains not only to individuals. It includes the surrounding space in which individuals live and work.

Feng shui focuses on the relationship between inner and outer worlds. It affirms that there is an important interrelationship, for example, between the condition (both physical and "energetic") of the walls we live and work inside of and the vitality of the living structures (bones, organs, tissues, etc.) that "live" inside of us.

This relationship between what is inside and what is outside also pertains to our feelings, moods, and emotions. Whether we feel optimistic and lively or depressed and bored is intimately related to what we see and feel around us-that is, to the overall quality of the external space in which we live or work. For example, a sanctuary in which many prayers have been uttered and many hymns enthusiastically sung will often feel uplifting to a person who enters there, long after the congregation has returned home. On the other hand, an office or home in which there have been frequent arguments and discord may have an aura of tension about it. It may convey an odd, unpleasant feeling, even to the casual observer.

In the feng shui perspective, a health practitioner's office is nothing less than a living, breathing organism with a body-mind all its own. This living container in which we work can potentially become a sacred space, once it

has been cleared of old energetic baggage and enhanced by strategies that feng shui recommends.

In the feng shui view, life energy suffuses the entire space in which we live and work. It literally permeates the walls of our offices and allows them to breathe. It expresses itself through the sounds, colors, light, artwork, plants, and other elements that fill our waiting rooms, examination rooms, and private workspaces.

Optimal circulation of chi can give warmth and character to our offices. It can enhance their aliveness. It can help convey to our clients a feeling of welcome, which can facilitate their healing. On the other hand, a setting in which chi is depleted or flowing poorly (that is, a condition in which "stagnant chi" prevails) can feel dull and enervating, leaving those who come there feeling fatigued, irritable, or depressed.

By learning to make informed choices about what your office should and should not contain, you can transform your workspace into a fertile environment where chi can circulate freely and your clients can thrive, a place where personal transformation and healing can flourish.

3. Acupuncture for the Office

An acupuncturist creates balance by inserting needles at specific points along the energy pathways, or meridians, of the body. The more harmonious the energy flow becomes as a result of that intervention, the healthier and more symptom-free the client will be. With feng shui, one facilitates balance, harmony, and optimal health by the placement of particular objects in specific, strategic locations in the external environment. In other words, the judicious selection and placement of chi-enhancing objects in specific locations within your office is analogous to the acupuncturist's skilled placement of needles at particular points along the meridians of the body.

Examples of life-enhancing objects that can promote health and well-being are cut flowers and plants, mirrors, works of art such as paintings and sculpture, crystals and gemstones, fountains, chimes, and lighting fixtures. Important too is the choice and placement of the furniture itself (see Fig. **1).**

4. Taking Inventory: Uncluttering

Knowledge is learning
something every day.
Wisdom is letting go of
something every day.

Zen Saying

Plan a time to do a physical exam of your work space. Start with the room that concerns you the most or that seems to need some attention. Take a few breaths and slow down. Look around. Take inventory. What do you see?

Notice what's already there that you like, that's currently useful and functional in your work. What do you have in your work space that you love? Take a few minutes just to say "Hello, I see you" as you pause to celebrate and enjoy what's already in place just the way you like it.

By including in your awareness an appreciation/gratitude for what you already have, you increase your level of comfort and receptivity. You create a context, or "energetic foundation," for what is to be added, and you naturally attract more of what you want. Recognizing that you do not have to settle for what you have or compromise your tastes and preferences, you begin to build a "success track" for having what you do want.

Before adding anything, however, decide what needs to be subtracted. What will you let go of? What do you see that is neither aesthetically pleasing nor functional? Be sure to include in this inventory items that may have been forgotten, lost inside drawers, or tucked away in storage areas, closets, or cabinets.

Virtually nothing does more to impede chi-and thus stagnate the flow of energy in a room-than clutter. Clutter can undermine your clarity and decision-making skills. It can reflect back to you (and your clients) the distorted and unfortunate perception that life is restricted, with no opportunity for freedom and mobility. **A** cluttered environment can reinforce the erroneous limiting belief that one is " stuck," that things cannot flow nor circumstances improve.

Right now create an intention that your office environment be uncluttered, clear, and current. Make a heartfelt choice to have your work space cleared of anything and everything that is no longer useful and in good repair. You might frame this intention as an affirming sentence, such as "I choose to enjoy working in an uncluttered, up-to-date environment that is optimally healthy for me and for my clients." Perhaps write it down somewhere where you can reread it from time to time. Reminding yourself of what you truly want by rereading your choice is like watering the seeds of your intention—so that they can sprout and grow into a garden of delights!

If you've had a long-standing pattern of disorganization and settling for whatever is already there, this task of uncluttering may at first appear daunting. So begin by taking some relatively small steps. Focus on one particular room, surface, cabinet, or drawer. By initially taking action in this limited but focused way, you make a powerful symbolic gesture that can help break the inertia of old dysfunctional habits.

Uncluttering typically gets easier as you move along. You are likely to find that once it is up and running, your uncluttering project quickly gains

momentum. One approach is to remove a specific number (perhaps five or six) of extraneous items from your living/work space each day.

There's an adage in acupuncture that extols the healing power of "one needle, properly placed." In applying feng shui, the strategic action of removing even a few unnecessary items that were blocking the circulation of chi can be like that "one needle," sending far-reaching effects throughout the body-mind of your office. By making a few seemingly small changes, you can dramatically improve the way that you and your office feel.

5. Living and Working with What You Love

Feng shui teaches the importance not only of removing from your environment what is unnecessary, but also of including what is particularly energizing and uplifting. To enhance the vitality of your workspace, it will be important to look within yourself for guidance. Only you can know what you truly resonate with and, therefore, what strategic decisions need to be made.

As you make the rounds of your office, carefully consider what you would love to have or have more of. What needs to be changed? What needs to be added? What parts of your office feel most in need of revitalization? By trusting your own sense of what's right for you, you can honor your own tastes and preferences.

In feng shui, the entry way is a place of special significance. It is the "mouth of your workplace, an important channel through which the chi enters. So take an especially careful look at your entryway. Is the entryway to your office a "mouth" that bears a welcoming "smile", or does it wear a more neutral, nondescript or bland expression? An important clue may be to notice how you feel when you first step into your office. Are you happy to arrive there? When you walk in the door, do you feel energized? Do you yourself feel welcomed?

If you have a waiting room, go there and look around. Does it reflect the healing atmosphere that you wish to offer your clients? Is it a sanctuary that conveys welcome and nurturing? If not, you might want to bring in some robust, flourishing plants, especially those with full, rounded leaves, or a small table top fountain whose delicate sounds can soothe and delight your clients as they wait to see you. Consider replacing existing light fixtures with full-spectrum units. Perhaps hang a small wind chime near the entryway, as I do in my office, as a playful, musical invitation into your world.

How about your desk or therapist's chair? Do you feel good when you sit down there? You might consider hanging a painting or a photograph that you love on the wall opposite where you sit (and also across from where your client sits). Placing a vase of cut flowers nearby, especially in the far right-hand

corner of your desk, can help promote vibrant, harmonious relationships among you and your staff. (Remember, feng shui is a kind of acupuncture whose "acu-points" can be activated by the placement of chi-enhancing objects in particular locations. To learn specifics about feng shui's so-called *Ba-Gua,* or energy map, see books listed in the Resources.)

6. Healing Properties of Music and Sound

Music affects the brain and body in fundamental ways that science has yet to explain. It is a mysterious energy that can enchant, energize, heal, and haunt us. It is far more than what meets the ear.

Don Campbell (Campbell, 2001)

Sound and music of all kinds have been a source of inspiration and delight for as long as humans have lived. Plato believed that human health could be positively influenced by music, theorizing that music helped man attune to nature's intrinsic harmonies. Music was seen by Plato as being a direct bridge into the "order of the universe." Thus, through listening to music, one might reasonably hope to find balance and peace within oneself-by coming into harmony with the cosmic order of nature.

One practical way of bringing healing music into the office environment is to choose from among the plethora of commercially available recordings. These compositions, which typically include musical scores or sounds recorded directly from nature, are designed to reduce stress or to promote particular moods or states of awareness. Of these, a series known as "The Mozart Effect™" are probably the most well-known and best researched. Their proponent, Don Campbell, from a handout given by him at a 1999 workshop, defined this "Mozart Effect™" as "an inclusive term signifying the transformational powers of music in health, education, and well-being."

Applications of "The Mozart Effect™" include the use of music to reduce stress; the innovative and experimental use of music and sound to treat attention deficit disorder (ADD) and other psychological disorders; and the use of music as a complement to imagery and visualization, to foster creativity, and to reduce depression and anxiety.

For stress reduction, Campbell recommended Mozart's andantes, slow (especially 60 beats per minute) Baroque music, and spacious New Age music. Of the latter, a personal favorite of mine is music by Celtic vocalist

Enya. Of his own audio series, called the Mozart Effect™, Campbell suggested that Mozart Effect I be used on the drive to work, Mozart Effect II for general relaxation, and Mozart Effect III for commuting home.

Also worthy of note is the pioneering work of Steven Halpern, who for the past 25 years has created a variety of musical compositions that invoke positive emotions such as peace, joy, and creative inspiration. His Inner Peace Music® series offers audio compositions designed to promote relaxation and emotional well-being (see Other Resources).

Do whatever you can to enhance the healing potential of your office environment by inviting in the sounds of nature. Allow nature's "voice" to be heard as she circulates through your office. Bring in sounds that mimic nature, or that have been recorded directly from nature, and play them quietly in the background, in your private office or in your waiting room - streams flowing over rocks, bird calls, songs of whales and dolphins, or the murmuring of ocean surf. Or choose classical works, such as the symphonic music of Haydn or Mozart, Vivaldi's "Four Seasons," Beethoven's "Pastoral Symphony," or a Bach Brandenburg concerto. Alternatively, you might select instrumental music that invokes the feeling of gentle wind, such as Japanese *shakuhachi* flute music.

Interestingly, many studies suggest that by choosing the music that you like, whether or not it matches what "the experts" recommend, you'll be most successful in creating the mood, ambiance, and therapeutic effect that you desire. So once again, trust your own sensitivity and live with what you love. Be willing to experiment, within the bounds of your own musical tastes, to find out what works best in your particular situation.

7 **Negative Ions**

Negative ions are molecules of air that, because of the excess of electrons that they carry, purify and vitalize the air that we breathe. Breathing air that is deficient in negative ions can contribute not only to physical illnesses such as asthma and allergies. It can also undermine our sense of well-being and leave us feeling enervated and dull.

In Chapter 10 on breath work, I elaborated upon the central role that breathing plays in many aspects of emotional health. Though ambient air quality was not specifically discussed, I agree with Rob Ivker, DO, author of *Sinus Survival,* when he says that "there is nothing more important in human health than the quality of the air we breathe" (Ivker, 2000, p. 104).

Ion-depleted air, defined as air containing less than 200 negative ions per cubic centimeter, can be a significant causal factor in "sick-building syndrome." This is the antithesis of the fertile environment we've been seeking

to create. Thus, if we want to create healthy environments for ourselves, our families, and our clients, it behooves us to find ways to optimize air quality.

One way to do this is to obtain a state-of-the-art negative ion generator, such as the air vitalizer recommended by Dr. Ivker. For an in-depth discussion of air quality and purification, see Ivker (2000).

B. A THRIVING PLANETARY COMMUNITY

We saw men haying far in the meadow,
their heads swaying like the grass they cut.
In the distance, the wind seemed to bend all alike.
Henry David Thoreau (as quoted in The Sun, January 2001, p. 48)

Human health might be described as the natural expression of a thriving planetary community, one in which our dance with environmental elements is harmonious and optimal. In this attitude of divine openness to the flow of nature, the interconnectedness among human beings, in harmony with all life, can best be celebrated.

Embraced by this genuinely holistic philosophy, your office can become a sanctuary that delights the heart and awakens the spirit of whoever comes there. By recognizing the healing potential of the environment that you create, and by taking strategic action that will promote the vital, rarefied ambiance that you desire, you will not only become a more enlightened practitioner of whole-person psychotherapy. You'll become an architect of the spirit!

As you explore ways of revitalizing your environment, it may help to recall the ecological perspective that Thoreau offers through his reverie of watching ordinary people at work in the hayfields, "swaying like the grass they cut . . . [as] the wind seemed to bend all alike." Remember that your workplace is not an isolated or separate island, nor are you a disconnected element within it, out of context with what surrounds you. Rather, you and your office are a microcosm of the entire universe, engaging intimately with all that is.

Ultimately, the more you can acknowledge this interconnectedness-and the more you can do to promote health, in both the inner and the outer environment-the brighter the future of our entire world becomes. By

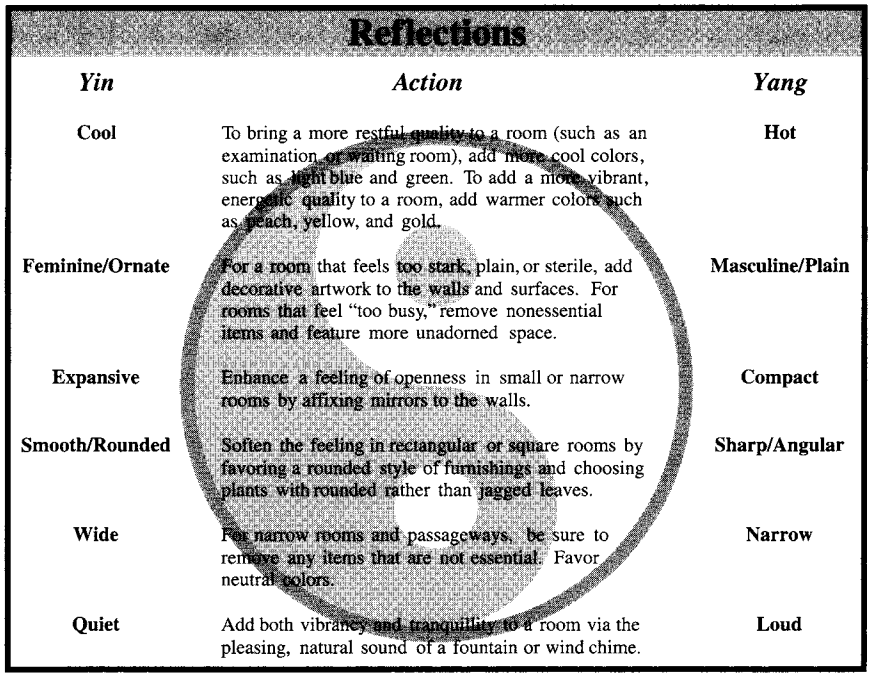

Figure 1 Creating balance. As with acupuncture and other applications of Eastern medicine, the balancing of opposites, yin (feminine) and yang (masculine), is intrinsic to the feng shui system of healing. The chart contains a few examples of these yin and yang qualities and what you can do to balance them in your office environment.

bringing beauty and balance into your immediate world, you will serve yourself and your clients best. In a profound, yet ineffable way, you also will enhance the quality of life for all living beings—the mountains and the rivers, the oceans and the skies, the plants and the planets.

V. TRAINING AND CERTIFICATION

Certification programs in feng shui, which can be completed in a series of weekends or weeks include the Western School of Feng Shui in San Diego (Terah Collins, (800)300-6785); the Accelerated Path in Seattle (Nancy Santo Pietro, (206)329-7168), and the Metropolitan Institute of Interior Design in Plainview, New York. There are also weekend training programs, which can provide valuable basics for the health practitioner.

Qualified practitioners of feng shui can be found most readily through the aforementioned schools, instructors, and programs. The Metropolitan Institute of Interior Design (MUD) offers courses by Denise Linn, Roger Green, and others. Contact MUD at (516)845-4033 or www.met-design.com. Anthem International offers classes with Katherine Metz and others: (303)444-1548.

Audiotape classes with Terah Kathryn Collins and others are available through Rich Welt and Associates, (800)240-7716. An instructional videotape, Feng Shui *Today,* is available from Jamie Lin, (800)327-8433.

The Feng Shui Institute of America, which calls itself a "professional organization committed to establishing standards of excellence, disseminating information, and training professionals in the person/place connection" coordinates workshops and offers home study courses. Contact the institute at (561)589-9900 or www.windwater.com.

Feng Shui Network International in London, England, offers courses in feng shui and "space clearing" with Karen Kingston and others: Tel: 0171 935 8935. The Feng Shui Warehouse in San Diego sponsors training and sells books and other items: (800)399-1599.

Feng shui practitioners typically charge $90 to $150 per hour. A minimum of three hours is usually needed for a basic consultation.

VI. RESEARCH STUDIES

A. LIGHT

Probably the best-documented relationship between an aspect of the physical environment and a mental health syndrome is the effect of natural sunlight or full-spectrum light on Seasonal Affective Disorder (SAD). One recent study (Terman *et al.,* 2001), for example, has shown that the magnitude of the antidepressant response to the administration of natural or full-spectrum light varies with the particular timing in which that exposure takes place, its effect being linked to circadian rhythms.

A 1999 study (Braun *et al.)* examined the effect of winter bright light therapy on binge and purge frequencies and depressive symptoms in subjects with bulimia nervosa. Female bulimic outpatients were randomly treated with either 10,000 lux bright white light or 50 lux dim red light (placebo) during the winter months, using double-blind protocol. The mean binge frequency decreased significantly more from baseline to the end of treatment for the bright-light group *(p = 0.017)* versus the placebo group.

B. SOUND

Though the formal investigation of the effects of music on human physiology began in a rudimentary form more than a century ago, interest in music therapy and other aspects of healing through sound has recently been on the rise. Music therapy has been gaining acceptance as a legitimate therapeutic modality.

Researchers have been looking at how particular aspects of sound can affect mood, emotion, and energy level. In one recent study, the investigators used specially created music tapes to facilitate mood effects (Le Scouarnec et al., 2001). These tapes were embedded with audio tones, imperceptible to the listener, that gave rise to "binaural beats." Of interest to these researchers was the possibility that such tones might entrain human brain waves into frequencies classically associated with specific states of awareness, as measured by EEG. (For example, theta waves have been most typically associated with sleep and meditative states, alpha waves with mild relaxation, and beta waves with alert attention.)

All the subjects were in treatment for mild anxiety, with a minimum score of 30 on the Burns Anxiety Scale. These researchers concluded that "music with embedded audio tones in the delta/theta frequencies reduced anxiety in this mildly anxious population" (Le Scouarnec et al., 2001). Music has also been used successfully in conjunction with surgical procedures, to reduce anxiety and allay fears. John Graham-Pole, MD, in his commentary "Use Music to Soothe the Surgical Patient," noted that "there is considerable research concerning the significant anxiolitic, analgesic, and rehabilitative effects of music in the perioperative area" (Graham-Pole,) A pilot study by R. R. Pratt (1999) showed that patients' use of self-selected music left them feeling less anxious and reduced their need for pain medication postoperatively.

C. NEGATIVE IONS

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According to the American Music Therapy Association (www.namt.com), "Music therapy is the prescribed use of music by a qualified person to effect positive changes in the psychological, physical, cognitive, or social functioning of individuals with health or educational problems."

specific antidepressant for patients with seasonal affective disorder, suggesting that negative ions may be useful as an alternative or complementary treatment with light therapy and medications.

2. Buckalew, L. W., and Rizzuto, A. (1982). Subjective response to negative air ion exposure. *Aviation Space Environmental Medicine,* 53(8), 822—823. This study investigated specific subjective or psychological effects of relatively long exposure to negative ions generated by a conventional air purification device. Analysis of mood index data showed that for the ion exposure group there were significant changes in the subjective perception of both physiological state (relaxation increased: $p<0.01$) and psychological state (irritability, depression, and tenseness decreased: $p < 0.01$).

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EMF Interface Consulting
P.O. Box 2112
Wimberley, TX 78676
Phone: (512)847-3076
Web site: www.emfinterface.com

International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM)
356 Goldco Circle
Golden, CO 80401
Phone: (303)278-2228

Steven Halpern's Inner Peace Music@
Phone: (800)909-0707
Web site: www.stevenhalpern.com

Sinus Survival
Phone: (888)434-0033
Web site: www.SinusSurvival.com

Sounds True Recordings
Boulder, CO
Phone: (800)333-9185
Web site: www.soundstrue.com
An excellent source for healing tapes and books
Universal Light Technologies (Jacob Liberman)
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Chapter 24

The Therapeutic Power of Music

John Diamond, MD

I. USING MUSIC THERAPEUTICALLY

A. HISTORY

The therapeutic value of music has been recognized for thousands of years in both Western and Eastern traditions (Cole, 1993; Epperson, 1967). To the ancient world, music was seen as an inherently therapeutic modality. Early philosophical literature, from Confucius (Cole, 1993) through to Plato and Aristotle (Lippman, 1975), contains many discussions about the positive and negative effects of music on individuals and society in general. It is only comparatively recently, since the Renaissance in fact, that music has become

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divorced from its therapeutic component. The near total schism of the two that exists in contemporary Western society would have been unthinkable to early civilizations, just as it is in most so-called primitive cultures that exist alongside our own in the world today (Schullian & Schoen, **1948).**

B. CURRENT TRENDS

Music in our society today is probably further removed from its therapeutic roots than at any other time in our history. In our present culture, dominated as it is by muzak, MTV, and gross over-commercialization, music has become mere entertainment, and there is little genuine interest in its use as a therapeutic modality (Hall, **1982).** To most people, the idea that music could affect their health, positively or negatively, is absurd. Although we may retain some vague notion of music having restorative capabilities—for example, when we think of listening to music in order to relax-as a society we have lost touch with its fundamental power and purpose. Consequently, we have also lost the ability to discriminate between music that is genuinely beneficial and that which is not. Essentially, our only criteria for evaluating music are aesthetic, and these can be highly misleading since the most superficially appealing music is often the least therapeutic.

Despite the attitude of society as a whole, the past **25** years or so have seen a considerable increase in the use of music in clinical situations, particularly those involving the treatment of mental illness (Wigram & De Backer, **1999)** with the field of music therapy still in its infancy (Bruscia, **1998).** Many techniques and approaches have been employed, including singing, dancing, improvising with instruments, call-and-response games, and the extensive use of hand drums. These methods have various goals: to encourage social skills among patients, to facilitate the expression of emotions, and to stimulate cognitive function and awareness. However, in spite of effecting documented changes in all these areas, these techniques aim to do little more than relieve symptoms and control behavior. In my view, such aims do not even begin to exercise music's full potential as a therapy, nor do they constitute any real attempt to deal with the underlying causes of disease.

C. CONTROVERSIES IN THE FIELD

While there is general agreement that music does affect the mind and body, there is little consensus or understanding regarding the actual means by which it does so (Feder & Feder, **1998).** One major focus of my research

(Section IV) has been to delineate the precise nature of this relationship and to devise numerous ways to maximize music's therapeutic potential, an important element of which has been the establishment of objective clinical criteria to evaluate the therapeutic success of these methods.

The existence of such criteria is one of the many ways in which my work with music differs from conventional music therapy. The two are easily confused at a superficial level since both aim to exploit the therapeutic potential of music, but I would like to focus on two areas that highlight important differences between them, concerning the music itself, on the one hand, and the therapist who is using the music, on the other.

1. Examples of Variables Other Than the Therapist or Patient

While there is broad agreement that music has therapeutic potential, the mechanisms whereby music becomes a healing modality have been little explored. Many important variables are generally ignored. Here are a few of the many hundreds of variables.

a. Music and Performance

The first major difference between my work and music therapy is that there is a tendency in music therapy to treat music as an absolute phenomenon rather than a contextual one. For example, there is a widespread belief in our culture that certain kinds of music are particularly healing: Mozart (Campbell, 1995) and Gregorian chant (Le Mee, 1994) are often-cited examples. My research indicates that the reality is considerably more complex and subtle. I have found, for example, dramatic differences in the therapeutic value of various compositions by the same composer. In addition, one performance may be moderately beneficial, a second highly therapeutic, while a third may have no therapeutic value at all (Diamond, 1981b). Similarly, with Gregorian chant the therapeutic potential of the performance depends as much on the particular work that is being performed as it does on the group performing (see Section I. C. 2).

b. Acoustics

Acoustics play a very important part in considering the therapeutic value of music-whether live or recorded.

c. Sound System

A crucial variable is the sound system by which the recording is reproduced. This will have a tremendous effect on the overall healing quality,

dependent on the type of equipment, whether the speakers are in phase with each other, and many other variables.

d. Recording Technique

Another factor is the recording technique used: Pulse Code Modulation (PCM) digital recording, for instance, will negate any therapeutic value in the music (Diamond, 1980b). It is profoundly stressful to the human brain and actually *causes* severe processing problems, instead of alleviating them (Diamond, 1980a).

2. Intention of the Therapist

The second area of major difference between my work and conventional music therapy follows from the first. Let us imagine a situation where a therapist is singing or playing to a patient or encouraging the patient to sing or play-an everyday occurrence. Music therapy believes that the singing of the song is automatically therapeutic, in much the same way it assumes that listening to any composition of Mozart is inherently beneficial. However, my research suggests that this view is based on an incomplete understanding of the way in which music actually affects us. Because of this, it fails to take into account what I have found to be one of the most fundamental truths about musical performance of any sort: *every aspect of the performer and the composer is transmitted to the audience and, because music has tremendous power to get inside, will strongly affect the listener.*[1] This transmission occurs not primarily through the brain, as is usually supposed (Storr, 1992), but via the medium of the acupuncture meridian system. Thus, I have found, for example, dramatic differences in the therapeutic value of different therapists singing or playing the same piece of music, as well as in various recordings of the same composition performed by different conductors. The intention of the therapist is of the utmost importance.

In my book ***Life*** *Energy* (Diamond, 1985), I delineated the precise relationship between each of the 12 acupuncture meridians and their corresponding emotional states. Let us take the example of a pianist who, for some reason, is in a state of anger. However else we may choose to interpret this state, it means that at some level he is suffering from an underactivity of the heart meridian. When he plays, it will be this meridian weakness that is transmitted, unconsciously and unavoidably, to the listener. This means that

[1] In some situations, the musical composition has a certain degree of therapeutic impact. This reflects the composer's intention, which may then influence the performer. However, the performer's intention is still responsible for the more immediate therapeutic effects of the music.

For further discussion of the relationship between the heart meridian and anger, see ***Life*** Energy (Diamond, 1985).

while the music is playing, and usually for some time afterward, the listener will have an identical meridian weakness, and therefore an identical emotional state, to that of the performer.

I should also make clear that this transmission occurs *utterly independent of any subjective emotional or aesthetic response by the listener:* If the performer is in a state of anger, a technically perfect and apparently tender rendition of Brahms's lullaby will transmit this state just as directly as the most aggressive and dissonant piece of contemporary music. Furthermore, if this performance is recorded and then played to a patient, the emotion of anger will now be transmitted to him or her!

However, the reverse is also true: If the performer is in a predominately positive emotional state, this too will be transmitted and will strengthen the acupuncture system of the listener. The moral and social implications of this apparently simple piece of information are beyond the scope of this introduction, but if we are to optimize the positive effects of music, we must begin to realize the crucial significance of therapeutic intent, both conscious and unconscious, in performers and therapists alike. In spite of its critical importance, the variable of intent (i.e., not considering the role the unconscious plays in music) has been consistently ignored throughout the entire corpus of music therapy research.

D. PHILOSOPHY

1. Life Energy

My research has shown that the therapeutic value of music can be basically divided into three groups: untherapeutic, therapeutic, and transcendental. The focus of my work has been to delineate many of the problems in the performer and the music and how to overcome them so that the music is the most healing and thus transcendental. All my research shows that the core reason why music affects us in the way it does is because it has tremendous potential to raise our Life Energy. *Life Energy* is the term that I use to describe the innate healing power of the body. This force has been given many different names throughout the history of medicine (Diamond, 1979). Hippocrates, for example, called it the *Vis Medicatrix Naturae,* the healing power of nature, while Paracelsus spoke of it as *Archaeus.* Elsewhere it is called *Prana* or *Chi.* It is Spirit, it is Love. Life Energy is intimately connected with health in the broadest sense, in that underneath the specific symptoms of any particular illness we will always find a diminution of Life Energy. Therefore, if we want to help overcome the root of the disorder, whether mental or physical, we have to raise the life energy of the patient.

Of course the effect of almost any therapy, when correctly performed, should be to raise the Life Energy. However, music is universally the most efficient means of doing this that I have yet found. To find out why this should be, we must discuss both the philosophy and origins of music, indeed to venture further into some broader philosophical and psychological issues.

2. Cantillation

a. The Mother-Child Relationship

Although individually manifested, there is only one diagnosis for each and every being: the anguish of the human condition arising from the inability to find our souls, the love, that we each are. This above all else determines our level of Life Energy and therefore our overall degree of health: The more loved we feel, the higher our Life Energy and the more truly healthy we become. This inability to feel loved relates at an unconscious level to all our relationships, but of these, that with our mothers is the most important (Diamond, 1981a; Klein, 1975). The mother-child relationship is the fundamental human relationship: she was our whole world when we were young, and she is, in a metaphorical sense, our whole world now. It is our lack of belief in her ever-constant love, her pure maternal instinct, that is the root cause of our anguish-the universal anguish of the human condition.

b. Misprocessing

There are many reasons for our inability to find our mother's love. One main reason is connected with our brain's misprocessing-a consequence of uncorrected birthing trauma caused by the difficulty of our present evolutionary state: too large a fetal head and too small a maternal pelvis (Wills, 1993). This misprocessing affects us and our inability to receive her love and it affects our mothers, who as the result of the trauma of her own birth hinders her ability to fully manifest her innate maternal instinct. The task of our lives may be seen as the overcoming of our misprocessing so as to then see past our mother's own misprocessing to the Mother she yearned to be. Only then will we be in touch with the higher truth that our mother, and therefore the world, loves us always.

c. Cantillation and Music

The feeling of Belovedness, of being loved by our mothers, is what I term *Cantillation* (Diamond, 1988). In a sense it is simply a state of very high Life

Unfortunately, it is difficult to talk about this in a psychiatric context. I hardly ever find the word "love" in the index of conventional psychiatry textbooks.

Energy, but it has a specific psychological connection with the mother. Cantillation is therefore the ultimate goal of therapy, that which lies underneath more superficial symptom relief. The word is derived from *cantare,* to sing, and is applied in a variety of ways. The most usual usage comes from Judaic and Christian practices and denotes a special way to sing old religious texts; one definition is "a musical chanting of sacred texts, or prayers by a solo singer in a liturgical context" (Chew, *1980).* I coined my application of the word because it relates to singing and implies an egoless, aspirational way of approaching music. I use this, then, as an analog for all of life. Thus music that reaches a state of Cantillation is the most therapeutic.

d. The Lullaby

Music is the most effective way of achieving this state of Cantillation because of its profound association with the mother at her most loving. Music originates in the womb, with the mother's rhythms and her sounds: her breathing, her heartbeat and especially her voice. After birth, it continues with the lullaby - o u r first music, used for the explicit purpose of communicating love, comfort, and peace (Commins, *1967).* The singing of a lullaby is usually accompanied by the rocking and cradling of the baby. A mother could not comfort the baby so efficiently by merely speaking, and it is highly significant that the type of speech mothers use to address babies, generally referred to as motherese or infant-directed speech (I prefer the term *lilting),* is much closer to music than to regular speech, with more strongly inflected melodic contours and rhythms. Thus music is the most efficient means of communication between mother and infant. All music is still, at a deep level, the mother's heartbeat, her breathing, her comforting and cradling, her lullaby. The power of music, therefore, lies in its ability to raise our Life Energy through reference to the primary relationship-that with the mother. There is nothing else I have yet found that invokes it so directly. All of this movement-in the womb and later rocking and lilting—are what I refer to as moving with the *Pulse.*

e. The Pulse

The concept of the Pulse is the philosophical foundation for all of my work (Diamond, *1999).* There are many names for the Pulse. It is the Tao, the Inner Truth, the Way: it has been described variously throughout civilization. But the word "pulse," with its particular connotations of both physiology and music, expresses much more. There are many different kinds of pulse-the heartbeat, the pattern of the ocean waves, the change of the seasons. These

smaller pulses are reflections of The Pulse, the movement of life, which underlies everything.

One of the ways in which we, as individuals, can feel this movement, this Pulse, is through music. The Pulse allows us to focus on the movement of the music rather than the notes or the technique. When we engage with musical activities with the Pulse, it is stress-free, both physiologically and psychologically. The Pulse thus provides the conceptual basis for the relationship between music and healing. As many healers have taught, when we move with the flow of life, we reduce stress and help our minds and bodies function as they are intended to (Csikszentmihalyi, 1996). When we go against that flow, life becomes difficult and we suffer, first emotionally and later physically. Learning to feel the Pulse in music can help us to actually experience that flow in ourselves and in others. Once we begin to feel it, we ***know*** whether we are moving with it or not and can make decisions accordingly. Thus music that puts us into a state of Cantillation is that which is performed on the Pulse.

/. *The Beat*

The opposite of the Pulse is the beat. The beat represents extreme regularity, predictability, going against the flow of nature. Whereas the Pulse represents high Life Energy and ultimately cantillation, the beat represents low Life Energy. We can also align this with the psychology of the mother-child relationship discussed earlier. Cantillation (and therefore the pulse) is the mother at her most loving. The beat and its concomitant low Life Energy are the negativity from the mother to the child-for no mother is perfect. Within each of us are images of two mothers: the one we know loves us and the one we fear. This latter is "she who must be obeyed" (like the title character of H. Rider Haggard's novel, *She).*

The clearest example of this is the metronome, which reduces music to a machine-like status. (I think it no coincidence that the metronome was an invention of the Industrial Revolution. Before then, musicians took the tempo from their pulse rate.) The application of mechanical standards and mathe-

The style of this article is adapted to the context and is quite different to my usual style, which I attempt to make as free flowing, as pulsatile, as musical as possible, for I believe that all communication about therapy should itself be therapeutic. For assistance in presenting it in this contrary style, I deeply acknowledge some of the diplomates of the Institute for Music and Health: Peter Muir, Paul Cavaciuti, and Michael Garber.

[5]Here, I do not mean "beat" in its strict, musicological sense; certainly music with a deep sense of the Pulse can have a strong rhythmic element, expressed by drums or other means (Section V.B). But the so-called beat in high Life Energy or cantillatory music becomes subsumed by the larger flow of the Pulse. This beat, therefore, has an underlying freedom and flexibility: it breathes.

matics to music-making is one of the main reasons our music culture is so nontherapeutic.

In this context, it is important to note the pervasive societal influence of conventional music teaching, most of which gives first priority to technical perfection. This creates a climate of fear and even hostility surrounding music, reflected in the frequent stage fright of professionals and amateurs alike. A child will naturally sing and play on the Pulse-yet the usual kind of music lessons, instead of nurturing this, will insist that he or she "must" get the music "right," thereby putting the child on the beat. This trauma is the main reason the majority who take music lessons give up after a short time.

3. Conclusion

Music is one of the most important modalites for helping mental illness. However, this situation is dependent on one vital factor-namely, that the therapists in question are aware of the variables that can affect the therapeutic quality of the music and that they have the aspiration to achieve a state of Cantillation.

Many individuals, trained or untrained, profess to use music therapeutically. But it will truly be therapy only when the practitioner is therapeutic. Then one is not a music therapist but a therapist who uses music as the chosen modality by which to express one's therapeutic zeal. Without the zeal, the therapy will never be therapeutic - and even without the modality, the true therapist will still be therapeutic. Treatment depends on the modality, but therapy only on the therapist - on the strength and purity of his or her therapeutic intent and wholehearted and passionate commitment to alleviate suffering.

I am dismayed and alarmed by the naivete of those recommending and using music without seriously addressing the many variables involved. To be an effective psychotherapist first entails years of examination of the unconscious motivation and attitude of the psychotherapist, and no less should be required of the music therapist. As a psychiatrist, I will take no notice of any psychotherapist who has not undergone extensive psychotherapy. It should be no less a requirement for a music therapist. Until those working with music therapeutically recognize that we have an unconscious that very often acts in opposition to what would seem to be our best conscious intentions, and can therefore vitiate any attempts at true therapy, music will never assume its role as being the greatest therapy.

To help to induce the state of Cantillation must be the essential task of the therapist who must recognize that the underlying condition, whatever the diagnosis, is always anguish and the finding of the soul, the love, the only

cure. The therapist must become a member of what Freud called a "new profession of secular ministers of souls" (Bettelheim, 1983). For music is the golden thread through the labyrinth of misprocessing to the soul.

II. THE RELEVANCE OF MUSIC FOR MENTAL HEALTH

A. INTRODUCTION

During my years in running psychiatric wards, I saw the greatest healing occur through the introduction of music (Diamond, 1983). The past 10 years have seen an enormous increase in the use of music in therapeutic situations, particularly in the field of mental health where various techniques have been employed (Section LB) with the ultimate goals of symptom relief and behavior control. Music has the potential to be much more therapeutic than this, provided it is on the Pulse.

1. Mental Illness and the Pulse versus the Beat

Music has a direct and demonstrable positive relationship to mental health when performed on the Pulse (Diamond, 1986b). The clearest example of one negative aspect of this relationship is perhaps that of ADD/ADHD. The past 20 years have seen a huge rise in the number of reported cases of this syndrome, particularly among children and adolescents. There have been many differing explanations for this, most of which have stressed organic causes such as imbalances in brain chemistry. However, I see this as being primarily a *social problem,* that of *a society that advocates life on the beat.* This is nowhere more clearly evidenced than in the most popular form of music that our society has produced: rock music.

Research has shown the negative effect of rock music in relation to depression, suicide, and other health problems (Hall, 1982; National Committee on Music, 1988), but most of this research has focused on the messages in the lyrics or the volume at which people usually listen to such music. While these elements are important, they are not the primary cause of the problem.

One of the defining characteristics of rock is its beat. My research has shown that the particular stop/start nature of the rock drumbeat, the stopped anapestic beat, has a tendency to inhibit respiration and cause extreme psychological/neurological stress (Diamond, 1979). It is no accident that over the past 35 years, rock concerts have been the scenes of numerous episodes of mass hysteria, which have resulted in violence, serious injury, and death

(Fuller, 1981). The increasing use of drum machines and computers to replace human beings in the performance of music, as well as the almost universal use of PCM digital recording techniques, only intensifies the rigid, mechanical qualities of the music and thus its tendency to induce gross misprocessing in the listener. The effects of listening to such music are cumulative: An individual will recover from brief, intermittent exposure, but over a prolonged period, the effects can be serious. Yet today this is the music that virtually everyone is exposed to through many media.

Consequently, I have found that when we helped anyone suffering from these conditions to sing, dance, or play music on the Pulse, their processing difficulties were greatly reduced and coordination was also improved. In cases involving hyperactivity, patients became calm and responsive.

The importance of the beat/pulse dichotomy cannot be overstated with regard to mental illness, not only as a philosophical construct or metaphor, but as a reality with tangible consequences. If we choose to do so, all mental health problems, indeed all illness, can be understood in this way with extremely positive results.

2. Altruism

A second concept central to the therapeutic use of music is altruism. The basic idea of altruism is to direct the music outward for the benefit of another-as the mother does with the lullaby. Once again this extends well beyond the field of music, and, indeed, its application in music leads to its development in a much broader context in life.

Altruism is health, whereas obsession with self is illness (Diamond, 2000). In illness, the patient's attention is directed inward. Part of any treatment of mental illness, therefore, must be to help the patient to think outward. Music does this from the beginning, by encouraging the patient to relate to a song or to an instrument. Furthermore, patients can be encouraged to make music with one another and to think of using their music as a way to help their fellow sufferers. Patients can also be encouraged to give their music out to help the staff, and this can be of great benefit to both groups in either a hospital or residential care setting. Finally, the patient can take the music out into life: to the family, community, and society, especially to their mothers in grateful receipt for the lullaby.

3. Self-Empowerment

Most mental health patients, particularly those who have been institutionalized for long periods, have lost all sense of power with regard to solving

their problems. In this situation, therapeutic music making helps because it gives the patient a sense of being actively involved in the recovery instead of being the mere passive recipient of treatment.

B. CONCLUSION

If the treatment of mental illness is to achieve anything more than symptom relief and behavior modification, the spiritual and energetic factors that underly all illness must be dealt with. Although music is still in its infancy as a therapeutic modality, it is a direct, powerful, and simple way to enhance Life Energy, and it can play an important part in an overall, ongoing treatment program.

While the concept of the Pulse may appear easy, it has important philosophical and psychiatric implications. Our Life Energy and our life choices can be seen as manifestations of the extent to which we can feel and live on the pulse. Through feeling the Pulse of music, we can address problems linked to the deepest, most profound, and fundamental theories of psychoanalysis and psychotherapy.

HI. ISSUES OF SAFETY, COMPATIBILITY WITH CONVENTIONAL CARE, AND CONTRAINDICATION

Music can be the safest modality to use in cases of mental health, with one proviso: that the musical activities be done on the Pulse. Music with a deep sense of the pulse will activate Life Energy and encourage Cantillation, which will, in turn, provide a deep feeling of comfort and security (Section I.D). Music that is on the beat, as opposed to the Pulse, should be avoided, for it will only remind the unconscious of the negative mother, who "must be obeyed." The beat will further imbalance the patient's life energy. For example, research (Hall, 1982; National Committee on Music, 1980) showed the negative effects of so much contemporary popular music in relation to depression, suicide, attention deficit hyperactivity disorder (ADHD), and other health problems. It is extremely important to alert people to these negative effects and then to affirm the potential positive benefits of music, to inspire them to make their own music and use it altruistically.

It can be enormously beneficial if the patient is helped to understand some aspects of the intent behind the use of music in the therapeutic situation, if he or she is so capable. Nevertheless, the patient is not required to have extensive psychological insight: deep psychology can be indirectly addressed sim-

ply through making high Life Energy music, because of its fundamental link with basic mother-child dynamics (Section I.D.2.d). In this way, music is a very unthreatening modality.

There are few conditions in which music is contraindicated and even these are generally temporary situations. Nonprofessionals often do not sing or play, due to some negative experience with music in the past. This is even truer for the professional musician, for whom a history of music performance and training has often been accompanied by stress and trauma. These difficulties can often be addressed through simple means: by reminding patients of their original love of music and by focusing on music's altruistic potential.

IV. RESEARCH

The field of music therapy has produced a vast literature of studies on the therapeutic uses of music (Standley & Pricket, 1994). Many of these are clinical studies (for instance, see Andsell, 1995); many others use standard investigative methods from the field of psychology (for instance, see Wigram & De Backer, 1999). These studies are often thorough and of good repute. Most, however, do not take into account all the potential levels of effect and the large number of variables involved (Section I. C).

My research is based on several models: holism, psychiatry, psychoanalysis—especially Freud and Klein (1975) in an application influenced by the philosophy of Cholden (1956)-as well as the development by Goodheart (1985) of Applied Kinesiology. Stemming from Goodheart's delineation of the link between the muscles, organs, and the acupuncture meridians, my own research linked the emotions to those two systems (Diamond, 1985, 1988).

My research results are thus based on more than 40 years of clinical experience in medicine, psychiatry, complementary medicine, holistic healing, and the use of Life Energy Analysis, a system I developed in the 1970s that links the emotions, the acupuncture meridians, and higher spiritual stages. This work has been the foundation of the so-called meridian psychotherapies.

For 25 years I have refined my research to delineate the major positive and negative emotions associated with each meridian, thus establishing the foundation for psychosomatic medicine. Every disturbance has an emotional component, which can be accurately determined by its mediation through the meridian system. Life Energy Analysis is the process, indicator muscle testing is the main (but not only) means by which it is carried out, and the body of knowledge is Cantillation, which is also the goal, the supreme aspiration.

Initially called Behavioral Kinesiology, it is an integration of psychiatry, psychosomatic medicine, applied Kinesiology, preventive medicine, and the humanities.

I have used music clinically for more than 40 years. In conducting my research on the therapeutic value of music, I have been involved in assessing many tens of thousands of recorded and live performances. In hospitals, private practice, workshops, and through conducting outreach programs, I have worked with innumerable musicians (from novice to international professional), therapists, and patients to determine how effective music is in raising the Life Energy. This clinical research has involved a wide variety of techniques, including adapting Applied Kinesiology techniques to assess the therapeutic value of musical performances and recording techniques, tracking the use of music by patients over long periods, in some cases up to *25* years, and the observation and evaluation of social dynamics in group music situations.

V. SIMPLE APPROACHES TO TREATMENT

My approach to music as a therapeutic modality is not symptom-specific. I do not have one set procedure for schizophrenics and another for the child with ADHD. My approach is person-specific and draws on the strengths of the individual patient. For instance, if I found that a patient already played a particular instrument or was interested in some other potentially therapeutic genre, that could prove to be an excellent starting point. Following from that point, of course, there are many potential further stages of development to pursue. Overall, a generalized therapeutic approach can be adapted to the individual. Although labor-intensive, customizing treatment in this way facilitates the introduction of music and allows a greater integration of it as an ongoing therapeutic modality in the patient's life.

My interest is not so much in treatment as it is in health, and health is living on the pulse. Therefore, all the music-making that I encourage with patients is devoted to that end: to help them to feel the Pulse of the music and through that to feel their own deep inner Pulse and their own desire for health. There are hundreds of approaches that aid the attainment of these goals, some of which I have documented elsewhere (Diamond, 1981b, 1983, 1986a, 1999). I will summarize here merely some general principles that are effective in working with a broad range of mental illnesses.

A. SINGING

Singing is absolutely vital. The first musical genre is the lullaby, the first and most innate, and most intimate, instrument is the voice. As well as being the most fundamental way of making music, singing also has important phys-

iological and neurological advantages. The most obvious of these is that it encourages free and continuous breathing. More significantly, singing is an inherently whole-brain activity, involving both hemispheres simultaneously (Diamond, 1979). This helps with processing problems and is also important in actuating a patient's overall creativity. Ideally, singing should be-must be-the basis for all musical activity (Diamond, 1999).

The use of song as a foundation for music-making is particularly important and requires some explanation. Some approaches to therapeutic music advocate the use of free-improvisation as a way for patients to express themselves. The problem is that such total freedom of expression is not in itself automatically therapeutic, and while such techniques may be appropriate for specific individuals, they can also compound certain problems. The purpose of music as a therapeutic modality is to help an individual to remember the feeling of being on the Pulse (Diamond, 1986b). In one sense, a person becomes sick because he or she has lost touch with that feeling. Therefore it is unlikely that one will find one's own inner Pulse again directly. It is much easier to find the Pulse in something else first and then use that as a reference with which to find your own, and the easiest way to do this is through song.

B. INSTRUMENTS

All individual instruments must be carefully selected and assessed for their Life Energy-enhancing properties, which can then be further optimized by very many particular means. The ultimate aim is always to make the marriage between the player and the instrument as loving as possible. It is important to remember that it is the patient who is encouraged to play the music him or herself rather than be a passive recipient. Thus the patient feels more loved by the instrument as his or her mother and can therefore give more love back to the instrument and to the world as his or her mother.

1. Percussion

I always encourage the use of simple percussion instruments, such as bones, castanets, and drums, especially the snare drum (Diamond, 1999). One crucially important feature of these instruments is that it is impossible to play a wrong note on them. You cannot really feel free with music if you are worried about making mistakes. When I start a patient playing the drums or the bones, I encourage them to sing first and then to coordinate and align the playing with their singing.

2. Brass

I often recommend the playing of brass instruments, which allows patients to express themselves directly and strongly. When done *correctly*, their breathing will be easier and more expansive, and they will become more centered, thus helping them establish a stronger identity.

C. MUSICAL MATERIAL

I have found that by far the most therapeutically effective type of music is American popular song from 1920-1950, the genres known as Broadway and Tin Pan Alley. These songs became popular because they are easy for the average person to sing. The style is closely characterized by strong internal rhythm and an irresistible forward movement. Further, the clearly defined contours of the melodies makes them easy to play on the Pulse with the drums.

Because of this strength and clarity of movement, many of these songs have inherently high Life Energy, which makes them doubly effective as a way of energizing patients. This genre also features lyrics with distinct rhyming schemes and clear narrative profiles. This makes them easy for patients to remember, even for those on heavy medication. Another characteristic of these songs is that they encourage the singer to treat them freely. The songs can withstand numerous changes of pitch and rhythm without losing their identity.

D. CONCLUSION

There is a great deal more to be said about the specific ways in which we can use music. Different songs have certain qualities thay may make them more suitable for particular patients. Certain instruments may be more appropriate, depending on an individual's history and degree of mobility or misprocessing. Skilled therapists will assess this and constantly adapt their approaches accordingly. The principles I outlined earlier will work as guidelines with the most important aspect being the intention of the therapist.

VI. TRAINING

Training in how to use music in therapeutic situations leading to a state of Cantillation is offered by The Institute for Music and Health (IMH), which

specializes in teaching this approach to musicians and therapists of all types. Previous musical experience is not necessary for acceptance in the training program.

Training is extensive and usually takes a minimum of 5 years. Course components include lectures, seminars, workshops, life-energy analysis sessions (one-on-one or in small groups), musical outreach and other music-making situations, and student study groups.

A. ASPECTS OF TRAINING

1. The Refinement of Intention

Through extensive feedback, the therapist's intention is refined. This involves an extensive course of Life Energy Analysis (Diamond, 1988). The model is similar to that of psychoanalysis, where a trainee analyst qualifies only after having undergone extensive analysis. As in that paradigm, this entails detailed examination of the unconscious motivation and attitude of the therapist.

2. Philosophy and Theory

Training involves learning and understanding the philosophical and theoretical concepts that underlie the therapeutic use of music (Sections I and II). The goal is the integration of these into the music and life of the student.

3. Sensitivity and the Refinement of Discrimination

Students work to refine their discrimination and sensitivity to facets of Life Energy. The goal is an increasingly accurate discernment of the Life Energy in an input, musical or otherwise.

4. Music Making

The student's musical abilities and knowledge are extensively developed, largely through music-making involving singing, movement, and the playing of simple instruments. The emphasis is on enhancing the Life Energy of the music so that it can be used as a healing modality in therapeutic situations. (If a student already plays other instruments, these are encouraged and developed as appropriate.) Previous experience of music making is not important, and all students are introduced to a wide variety of musical genres and styles

through participation and listening to both recorded and live performances. This results in the building of an extensive repertoire, enabling the diplomate to adapt to a wide variety of situations.

B. REQUIREMENTS

For enrollment in the IMH training, a love of music is essential, as is the desire to use music to help others. As already stated, previous experience of playing musical instruments is not necessary for acceptance in the training program. Knowledge of the technical side of music, including the ability to read music notation, is entirely optional throughout the training.

VII. RESOURCES

A. SUGGESTED READINGS

Ansdell, G. (1995). *Music for life: Aspects of creative music therapy with adult clients.* London: Jessica Kingsley. An illustrative example of music therapy case studies.

Bruscia, K. E. (1998). *Defining music therapy.* (2nd ed.). Gilsum: Barcelona. This clearly written analysis of the "young field" of music therapy has proved to be both popular and controversial. The appendix, quoting 61 definitions of the field from widely varying sources, is thought provoking.

Cole, B. (1993). *Music and morals: A theological appraisal of the moral and psychological effects of music.* New York: Alba House. As part of the author's theological exploration of music, Cole traces ancient attitudes toward music. He includes Confucius, but concentrates on Western thought. (Cole also touches on studies from the late 1980s on the deleterious effects of rock music.)

Davis, W. B., Gfeller, K. E., & Thaut, M. H. (1992). *An introduction to music therapy: Theory and practice.* Dubuque, IA: Wm. C. Brown. Representative of the standard textbooks on music therapy, this volume offers the additional advantage of a summary of non-Western and ancient practices. It is clearly written, with an extensive lists of music therapy resources.

Diamond, J. (1981). *The re-mothering experience: How to totally love.* Valley Cottage, NY: Archaeus Press. This book offers a clear outline of the importance of the mother-child relationship and suggests ways to approach this concept therapeutically.

Diamond, J. (1981) *The life energy in music, Volume I.* Valley Cottage, NY: Archaeus Press.

Diamond, J. (1983). *The life energy in music, Volume 2.* Valley Cottage, NY: Archaeus Press.

Diamond, J. (1986). *The life energy in music, Volume 3.* Valley Cottage, NY: Archaeus Press. These three volumes present research into the healing potential of music. Specific case studies are discussed and extensive parallels highlighted between music and everyday life.

Diamond, J. (1999). *The way of the pulse: Drumming with spirit.* Bloomingdale, *IL:* Creativity Press. This clearly presents the concept of the pulse. Drumming is used as a metaphor on how to play and move with the pulse of life.

Diamond, J. (2001). ***Belovedness and cantillation.*** Bloomingdale, IL: Enhancement Books. The state of cantillation and its relationship to the mother is explained with many examples of belovedness.

Diamond, J. (2001). ***Music and song, mother and love.*** Bloomingdale, IL: Enchancement books. A highly individual book with poetic aphorisms depicting the relationship between music and the mother.

Epperson, G. (1967). ***The musical symbol: A study of the philosophic theory of music.*** Ames, IA: Iowa State University Press. Epperson's second chapter summarizes both Western and Eastern ancient writings on the association of music with the emotions and healing.

Feder, B., & Feder, E. (1998). ***The art and science of evaluation in the arts therapies: How do you know what's working?*** Springfield, OH: Charles C. Thomas. Although music therapy is given the least amount of specific examination, Feder and Feder offer a clear guide for correlating standard psychological evaluation methods with those used in the arts therapies.

Hall, M. P. (1982). ***The therapeutic value of music.*** Los Angeles: The Philosophical Research Society. This highly individual essay includes discussions of the historical uses of music for healing and, in addition, thought-provoking ruminations on the current status of music in Western society.

Moranto, C. D. (Ed.). (1993). ***Music therapy: International perspectives.*** Pipersville, PA: Jeffrey Books. This is a thorough sourcebook for music therapy, offering a global perspective on that field's practices and resources. Moranto's own article on the United States, for instance, offers definitions, histories, lists of journals, conferences, schools of practice and their methods, an extensive bibliography, and so on.

Ruud, E. (1980). ***Music therapy and its relationship to current treatment theories.*** St. Louis, MO: Magnamusic-Baton. An exploration of the relationship between music therapy and four models of treatment: medical, behavioral, psychodynamic, and humanistic1existential.

Schullian, D. M., & Schoen, M. (Eds.). (1948) ***Music and medicine.*** New York: Henry Schuman. This early anthology contains several relevant articles. For example, Meinecke gives considerable detail on historical instances of both psychological and physiological healing through music in the ancient Greek and Roman worlds. There are introductions to the therapeutic use of music in non-Western cultures.

Standley, J. M., & Pricket, C. A. (Eds.). (1994). ***Research in music therapy: A tradition of excellence: Outsanding reprints from the*** *Journal* ***of Music Therapy, 1964-1993.*** Silver Spring, MD: National Association for Music Therapy. Together, the 52 articles in this massive volume provide an overview of music therapy approaches, applications, research, and history.

Wigram, T., & De Backer, J. (Eds). (1999). ***Clinical applications of music therapy*** *and psychi****atry.*** London: Jessica Kingsley. The articles in this recent anthology outline the application to music therapy of standard psychiatric and psychoanalytic concepts (transference, etc).

B. WEB SITES

www.apa.org. This site offers information on psychology and the arts.

www.diamondcenter.net. This site offers information on the Institute for Music for Life Enhancement.

www.mudivs.uvi.rfu/mtn.html. This is the site for the Music & Science Information Computer Archive (MuSICA).

www.musictherapy.org. This site of the American Music Therapy Association offers helpful information on the profession, training, and resources of the music therapy field.

www.srpmme.u-net.com/psymus.html. This site offers information on the psychology of music.

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Campbell, D. G. (1997). *The Mozart effect: Tapping the power of music to heal the body, strengthen the mind and unlock the creative spirit.* New York: Avon.

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Chapter 25

Synthesis

Scott Shannon, MD

I. OVERVIEW

The vast array of ideas presented in this text could create a state of information overload. From the broad conceptual theories of holism to the intricate and ancient model of five-element acupuncture, the range is staggering. The novel neo-Jungian premises of process work stretch us in one direction, while the relatively simple tradition of spiritual healing pulls us in another. Quite simply, this information, even with the unifying theory of holism, presents an enormous intellectual challenge. Beyond that, when pursued these conceptual premises call into question many of the spoken and unspoken assumptions that ground our day-to-day work. For instance,

- How do we reconsider our view of the therapeutic relationship if we are all capable of spiritual healing?
- If needling an acupuncture meridian or moving our eyes back and forth can heal emotional traumas, how does this change our view of the talking cure?
- If the body and mind has an innate self-correcting mechanism, then do we rethink how we employ psychotropic medications?

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These and many other provocative questions surface as we seriously consider the impact of these new concepts.

With this in mind, three areas deserve brief consideration before we can close this discussion. First, how do we personally integrate or process all of this? Do we reject or accept it out of hand. Or do we slowly incorporate it in a piecemeal fashion? These issues bring our underlying philosophical framework into scrutiny. Our approach to these questions will reflect some of our fundamental personal views of human nature, our world, and healing.

If the first area concerns our personal philosophy, then the second area concerns our philosophy of science. How do we value scientific information? How do we place into clinical context the fragmented, reductionistic data that we gather? Clearly, Thomas Kuhn (1962) told us that it is not only the data but also the underlying scientific paradigm and the individual or institution that determines this process of incorporation and its eventual clinical application. One paradigm will interpret the same data differently than another paradigm and thus lead to a different conclusion (Kuhn, 1962).

With a significant shift in paradigm, new methods for considering data and testing theories often come into common use. For example, Albert Einstein employed the thought experiment to present some of his groundbreaking theories to his peers in the physics community. This use of imaginary situations to challenge theories broke new ground for modern physics. If the randomized, placebo-controlled crossover studies are the epitome of reductionistic science, how will the emerging paradigm sort and value information?

What biases and limitations are inherent in our current model of scientific inquiry? The emerging paradigm brings new challenges to the scientific method. The greatest challenge that lies before us involves adapting the scientific method so that it can accurately test and explore the provocative theories that flow from the new paradigm. In this second area, we will explore how the current scientific methods fail us in this quest as well as our options to direct our scientific inquiry.

The third area of consideration looks at the values inherent in both the existing and the emerging paradigms. In some ways, each represents a polar extreme. What might a marriage of these two systems look like? How can we pull the best from each model to find a philosophy and system of treatment that best honors our human nature? This section explores the union of opportunities and how this has always been the true source of creativity and evolving wisdom.

II. **PERSONAL PHILOSOPHY**

Most likely, this text will challenge your personal philosophy and cause you to reconsider your fundamental premises of human nature and healing. Nevertheless, you may find these ideas very compatible with your internal worldview. On the other hand, you might reject all of the premises, treatment approaches, and research presented out of hand. Or you might find yourself in the middle, questioning the information presented and stimulated to explore deeper.

As documented in Astin's research (1998), the most common motivator for involvement in CAM practices stems from a search for better congruence with one's internal worldview. To some degree, therefore, your attraction to CAM modalities will reflect your current level of philosophical incongruence with the prevailing paradigm or practices. When we continue to engage in a professional practice or style that is not internally congruent, a part of who we are slowly begins to erode. True integrity results when our practice and our philosophy are in harmony. As a matter of personal justice and honesty, I encourage everyone to clarify their personal philosophy of healing and then move their practice into alignment. The modalities presented in this text represent some options for change and exploration.

III. **ASSESSMENT OF PERSONAL PHILOSOPHY**

The many chapters, topics, and techniques outlined in this text could bring you to a state of confusion, called, by some, *poly-paradigmatic paralysis.* You feel overwhelmed by the sheer volume of new concepts, perspectives, and approaches. Your eyes glaze over as you consider how to evaluate and treat your clients in the face of all this new information. Twenty or more discontinuous yet internally consistent styles come to mind simultaneously, which, in turn, causes a type of cognitive dissonance only rarely described in professional literature.

Well, good news! There is a way out of this tangle. First, each of us must look at and explore our underlying philosophical foundation. Exploration of these new concepts forces this issue on both the professional and the personal level. Most likely, this is part of the attraction for many who begin this journey. Table I provides a list of provocative questions that will enable you to explore your deeper philosophical foundation as it relates to healing. After you have finished this provocative exercise, a few common response patterns may emerge. They group together based on both your current level of fit and satisfaction and your desire to explore issues of personal philosophy.

Table I
Questions That Explore Our Deeper Philosophical Foundation as it Relates to Healing

1. Do I see people as body, body-mind, or body-mind-spirit? Fragmented or whole? What is our basic nature?
2. Can people truly heal? How? What helps this to occur? What hinders it?
3. Do I believe that each individual (with education and guidance) can be self-regulating? On all levels?
4. Is my view of human nature generally optimistic or pessimistic? Why?
5. Do I have deeper sources of wisdom/intuition that I can foster, uncover, or develop?
6. Am I separate from or connected to my clients? In what manner does this help or hinder my impact?
7. Do I need to honor my own issues of balance and health to be most helpful to others? If so, am I willing to do this?
8. Are spiritual issues important to me in my life? Are others' spiritual issues important in my work with them?
9. Am I completely satisfied with the professional model of evaluation and treatment in which I was trained?
10. Do I believe that this model provides adequate tools and techniques to answer all the problems that I face daily in my profession?
11. Does my current professional model/practice accurately reflect my deepest views of human nature and healing?
12. Do I at times feel restricted by my professional model or role? What are the aspects of my current professional role and function that limit me, who I am and what I do?

Once you sort through these issues, your path of integration with these topics will be much clearer, as your decisions will flow from your philosophical base. For example, some of you may find the process will remain peripheral because the new philosophy seems too foreign. In this case, the modalities will not be fully integrated. Some of you will have a modality or technique-driven approach that seeks to discover how well a specific modality (say herbal medicine) might gradually be incorporated into your practice. You may just desire information and not technique. Others will have a more philosophically driven style in which you acknowledge a deeper shift in your underlying orientation and seek to bring your practice into greater congruence with this philosophy. The modalities are secondary. In any case, these chapters present overviews or sketches of material that can be explored in much more depth should you discover an interest. Common response patterns are:

A. I am comfortable in my current role and philosophy but would like to be able to discuss these new topics with those patients or clients who ask.
B. I am comfortable in my current role but am curious about other scientifically valid approaches.
C. Currently, I am only partially comfortable in my professional function. I am unsure about some of my deeper philosophies and approaches.
D. I have never felt fully comfortable in my professional function. My underlying view of healing has always been broader and more inclusive. I would like to practice in more congruence with who I am and what I believe.

In addition, the fit between the modality and your own personality is also important. You may find yourself gravitating to one that resonates with some of your personality characteristics. For instance, some modalities are more detail oriented (homeopathy); some are more intuitive (process work). Some can be kinesthetic (cranial osteopathy), while others are sensory (aromatherapy). Modalities can be narrow and specific (EMDR) or broad and inclusive (Ayurveda). Some focus mainly on intent and connection (spiritual healing) or on calming and centering (the breath). Some fit well with Western allopathic medicine (nutrition; herbal medicine). Others are more foreign (meditation, medical intuition). The more you explore, the more you will understand this concept of fit. Some approaches may even repel you. That's fine, because there is value in understanding why you are attracted or repelled by something.

IV. KNOWLEDGE, WISDOM, AND VALUE

Is our day-to-day practice as mental health professionals scientific? No one would argue that psychology, psychiatry, or social work reflect the pure application of hard science. Perhaps physics or even physiology could make that claim, but we cannot. As the higher complexities of human functioning become involved, the pure application of knowledge mixes with the emotions, desires, and unique past experiences of the individual. These often drive human behavior so that it is impossible to be purely scientific or even completely consistent.

Even in the practice of medicine, studies have repeatedly demonstrated the inconsistent adherence to the prevailing science. For example, it is well known that medical practitioners generously distribute antibiotics to patients with probable viral infections. When asked why, they relate a variety of factors that often involve issues of wanting to do something and of hoping to

satisfy the desires and beliefs of the patient. Pharmaceutical company marketing may also play a nonscientific role in decision making. Additionally, individual practitioners can develop idiosyncratic beliefs and practice styles: "He tends to diagnose bipolar disorder in everyone" or "She sees dissociative identity disorder in all her patients."

Regional variations can also reflect a variety of nonscientific factors. For example, the rate of diagnosis of attention deficit hyperactivity disorder (ADHDJADD) varies by 20:1 from city to city and from 4:1 from state to state (Goldman ***et al.,*** 1998; LeFever, Dawson, & Morrow, 1999). Less than 50% of children receiving stimulants (the only common primary indication in children is ADHD) meet the current criteria for ADHDJADD (Greenhill, Halperin, & Abikoff, 1999; Jensen ***et al.,*** 1999; Wolraich ***et al.,*** 1996).

The fact is, you do not have to look hard to pierce the thin veneer of science in any field that involves humans caring for humans, for human motivation, desire, emotion, perception, intention, ignorance, creativity, and intuition keep us off the narrow road of pure scientific application of current knowledge.

Paradoxically, the more intensely we adhere to the goal of practicing pure science in a complex human field, the less effective we become. In this style, we, as practitioners, ignore the needs, desires, and complexities of the patient or client and emphasize our own need to be right and correct. All this is at the expense of those who come to us for healing, with the result that we are then perceived as distant, mechanical, or out-of-touch, rather than perceptive, wise, or engaging.

What, then, is the ideal for which we strive? What else do we need beyond knowledge? What key traits represent the ideal practitioner? Undeniably, the following stand out:

1. A comprehensive grasp of the current knowledge base of relevant science
2. A deep understanding of human nature and its nonlogical underpinnings
3. An ability to rapidly perceive an individual's unique needs
4. An engaging, warm, and compassionate style
5. A creative and intuitive distillation of all of this information and experience into a helpful treatment approach

In the view of Jerome Frank, MD, the command of knowledge (trait 1) may be important because of the confidence it generates within the practitioner and, therefore, within the patient or client (1961). If item 1 (grasp of current knowledge base) represents science and knowledge, then items 2, **3,** and *5* represent wisdom and experience. Item 4 reflects more individual personality, charisma, and spiritual development. Knowledge, wisdom, and the capacity to engage in relationships are critical for healing.

Synthesis reflects the ability to tie all of these together effectively in order to serve our clients' needs. In this way, we create an understanding of the relevant issues that produce an effective course of action. Thus, in the practice of mental health, we need to draw on both the data from science and the wisdom from our human experience. This synthesis represents our highest ideal in the care of others.

Our value system then determines how we weigh and select from these two aspects of human information-knowledge and wisdom from human experience. Fifty years ago, in the prime of psychoanalysis, analysts used very little data from double-blind, placebo-controlled crossover studies. Their primary emphasis was on theory, personal experience, insight, and wisdom. Today, the focus of psychiatry has gone to the polar extreme—heavy on knowledge and precise data but thin on wisdom and personal experience.

Much of this shift has been driven by the research protocols that serve as the bedrock of our foundation of knowledge. Psychiatry struggled with the lack of precise data and the specific scientific research that transformed the rest of medicine during the 1960s and 1970s. This created the disciplinary equivalent of penis envy. With the advent of SSRIs and the application of focused psychopharmacology in the 1980s, psychiatry is increasingly joining the research-driven medical community. Whereas training programs that emphasized biological psychiatry once stood out as uncommon, programs that retain a strong central commitment to dynamic psychiatry now form the exception. Nevertheless, neither extreme by itself serves us best. How then do we move toward creating a marriage of these complementary, stylistic approaches to human distress?

Much of the division is perpetuated by an over-reliance on one form or style of data. As we will discover in the next section, how we explore the questions that we ask often determines which questions we bother to ask and which answers we find. A specific dichotomy underlies the chasm between these two paradigms: Do we explore human experience by using an open or closed system model? Our choice determines which questions we ask and what we discover. Psychotherapy and psychopharmacology provide us with solid examples.

V. RESEARCH IN OPEN AND CLOSED SYSTEMS

Systems theory has helped us to better understand human behavior. For example, family systems theory broke down some of the artificial barriers that psychologists and psychiatrists had created in our perspective of human

behavior. We now accept that families are complex systems that provide a major influence on our development and behavior.

Even beyond this, systems theory has given us our best understanding of complex living systems. Ecology, for example, has built on the basic concepts of systems theory to model how varieties of living systems coexist.

A basic principle of systems theory explains that systems interact and influence each other in a complex manner. This defines an open system. It exists in a web of interconnected relationships that exchange information, food, energy, etc. All existing models of biological systems presuppose that they function as open systems. Death is an example of a closed system because in death, we cease our active exchange with the surrounding environment. A closed system has no active exchange of materials (chemicals, information, energy) with the outside.

Holism, ecology, complementary medicine, and the modalities explored in this text all celebrate the open system of interactive and influential qualities that we all possess as humans. Whether it is spiritual healing or process work, acupuncture or Ayurveda, all incorporate a premise of body-mind-spirit interaction (an open system) and the constant sustaining relationship that we have with our complex environment.

The prevailing paradigm of science has built itself on the precision and exactness of the pure sciences such as chemistry and physics. This precision and exactness has given us much in the way of useful knowledge and technology. The pure sciences have tended to employ a closed-system view of nature. This works well for a Newtonian physics experiment with motion or gravity. It also works well for simple chemical reactions in an isolated beaker, and it can be stretched to psychopharmacology research.

The preferred research design models for current science reflect this basic premise. Medicine and even the social sciences have also built on this foundation. We attempt to isolate variables and arrive at precise outcomes with specific degrees of certainty. This runs contrary, however, to our knowledge of how complex systems (human interactions) function.

Any area of health care that uses a closed systems model tends to develop more precision, exactness, and technology. The areas of health care that employ an open systems style (human behavior, human development, family systems, psychosomatic medicine, psychotherapy, public health, etc.) tend to have less precision, less exactness, less technology, less personal income, and less scientific respect.

Quite simply, the more we can fragment, isolate, and narrow our field, the more we can apply a closed system perspective with all that it offers in precision and technology. As we move from physics to chemistry to biology to psychology to theology, it becomes progressively more difficult to close the system artificially.

One only has to look as far as the research design model to know whether the premise is an open or closed system. Let's compare and contrast open and closed systems research design.

Psychotherapy research includes our best scientific efforts to scrutinize the therapeutic facets of a complex human relationship in an open system. The American Psychiatric Association's text on this subject, *Psychotherapy Research Methodological and Efficacy Issues* (Karasu, 1982.), compares and contrasts the ideal features of a classical research design model (closed system, i.e., psychopharmacological studies) and psychotherapy research design model (open system) (see Table II). These two models provide a study in stark contrast. For example, in a classical research design, the relevant dependent variable is held constant. In true psychotherapy, few variables can be

Table II
Differences between the *Ideal Experimental-Laboratory-Research Design Model* and the *Realities* of *Psychotherapy Research*

Classical model	Psychotherapy
1. The independent variable is a discrete stimulus or a bounded set of discrete stimuli.	1. The independent variable is a complex strategy or interaction with constantly changing tactics.
2. The pattern of presentation of the independent variable is standardized.	2. Variation of therapist behavior from moment to moment and patient to patient is the rule.
3. There is a provable causal relationship between the independent variable and the dependent variable.	3. There is no provable causal relationship between what the therapist does and the behavior of the patient.
4. The dependent variables are discrete responses.	4. The dependent variables form a complex set of responses and attitudes, which changes over time.
5. A small number of important variables influence the dependent variable.	5. **A** large number of variables influence therapy outcome; each exerts only a small influence.
6. Each relevant dependent variable can be held constant if desired.	6. Few relevant variables can be held constant, even if desired.
7. The direction of causation is one way—from stimulus to response, from independent variable to dependent variable.	7. The direction of influence goes two ways-from therapist to patient and from patient to therapist.
8. Stimulus and response tend to be contiguous.	8. There is no point in time at which the therapist's behavior or strategy can be said to have produced a therapeutic response.

(continued)

Table II **(continued)**
Differences between the *Ideal Experimental-Laboratory-Research Design Model* and the *Realities of Psychotherapy Research*

Classical model	Psychotherapy
9. The system is isolated from all others, as much as possible, in an effort to produce a closed system.	9. The therapist-patient system constantly interacts with other systems. Uncontrolled and unmeasured inputs constantly occur.
10. The system is concerned with the regularity and predictability of events.	10. The system is concerned with the meaning and logical structure of events.
11. Experiments are temporally linear; that is, *A* follows *B* follows C.	11. The meanings of an event are conditional—that is, **A** is determined by the meanings of B and C.
12. There is an experimenter who manipulates conditions that affect the subject, who is treated as an object.	12. Manipulation, to the extent that it occurs, works both ways. The patient is not treated as an object.
13. The possible range of responses of the subject are restricted to a few simple responses, such as *yes, no,* or *sometimes.*	13. The range of the patients responses is large and encouraged to become larger (e.g., in free association).
14. The experimenter is unconcerned with the circumstances of the subject's life.	14. The therapist is vitally interested in the circumstances of the patient's life.

From Karasu, T. B. (1982). *APA commission on psychiatric therapies: Psychotherapy research: Methodological and efficacy issues.* Washington, DC: American Psychiatric Association.

held constant, even if desired. A classical research model involves the attempts to artificially create a closed system, whereas psychotherapy research honors the openness of the system and the variety of uncontrolled inputs to the system. The classical model reflects an unrealistic, unnatural restriction of human experience (a closed model). The open model of psychotherapy is so complex and open (much like human experience) that variables cannot be easily isolated and the inputs into the system are difficult to narrow.

Thus, we are left with two choices: (1) focus on the more mechanistic and unnatural classical design models that presuppose a closed system or (2) accept the broad research and multivariable model of an open system approach. The closed system model gives us precise details and quantification that the pure sciences (physics, chemistry) enjoy, while the open system approach gives broader feedback with much less precision of hard data but more accurately reflects human nature and experience.

The emphasis that we have placed on precision has skewed our thinking and our exploration. The research models that we prefer dictate how we value data and thus structure our knowledge base. Through this mechanism, a paradigm

preferentially selects research design and then the research topics (Kuhn, 1962). In this way, we limit what we explore, what data we generate, and ultimately how we view reality.

Many factors come together to narrow our view of reality. First and foremost lies our paradigm view of human nature. Second, we have the type of experience that can be structured into a classical research design. Third, the cost of classical research and the lack of financial backing for nonpatented treatments limit our consideration for many treatment options. Ultimately, the overall flow of quality data (i.e., as published in peer reviewed journals) does not accurately reflect the value and needs of our society or its practitioners.

Methods of scientific scrutiny such as health outcome studies which honor the fluid, open nature of human experience, will find greater respect as we recognize the artificial limitations of double-blind, placebo-controlled, randomized studies. This type of research method emphasizes scientific method but with few artificial constraints. Perhaps even more important, the movement to health outcome studies will decentralize research and make it feasible for the average practitioner in both cost and time. We can begin to track treatment approaches over much more extended periods. Practitioners could self-regulate their use of treatment approaches based on this form of feedback. Every practitioner and every modality could be easily tracked. Prospective clients might request a review of a practitioner's experience with a specific problem. If information is freedom, then most prospective clients or patients are imprisoned as they attempt to select a health practitioner based on one or two word-of-mouth recommendations.

The widespread application of health outcome studies represents a tide that could raise all practitioners to a new level (for more information, see Medical Outcomes Trust under Resources). Classical research data may be important, but the application of treatments using this data, coupled with the practitioner's wisdom, creates something rnore real and relevant: the client's actual experience. This, in turn, can be tracked using health outcome studies. Feedback stands as the central tool for effective self-regulation. This ideal should be a part of every practitioner's professional practice. Health outcome studies open this door.

In summary, synthesis involves combining separate elements into an integrated whole. Holism and the therapeutic models represented in this text hold this concept of holism as a high ideal. The goal is to make us whole again. To accomplish this good, we must balance wisdom and knowledge. We also need to fully accept the open-system quality of human experience and reevaluate scientific research designs. **A** science that does not accurately reflect our true nature does us a great disservice by limiting and narrowing our view of both our capabilities and ourselves.

VI. THE MARRIAGE OF WISDOM AND KNOWLEDGE

In many ways, both the conventional health care system and the emerging paradigm represent very different, even polar opposite viewpoints. These differences appear in both practice and fundamental philosophy. If we focus on these differences, however, we will only generate conflict and controversy. On the other hand, we could generate consensus by finding commonalties.

A majority of primary care physicians is positive about the value of certain CAM modalities for their patients (Berman ***et al.,*** 1995; Berman ***et al,*** 1998). Certain modalities, obviously, generate more controversy (i.e., homeopathy, chiropractic, etc.). However, the best of CAM and its philosophies have broad appeal to practitioners. In addition, as the CAM demographics mentioned in Chapter 1 demonstrate, it also has the broad, popular support of the general public as well. This compels us to emphasize common ground rather than conflict.

Mediation is one process that resolves conflict by first validating the differing concerns on each side of an issue and then looking for their common ground. In this way, mediators can create a best interest solution that helps both sides support a win-win compromise.

Regrettably, our conventional health-care system believes not only that CAM is unsound, unscientific, and unsafe, but also that it may actually prevent people from receiving needed and appropriate care. The holistic practitioner is viewed as exhibiting fuzzy thinking and being deluded by pseudoscience. In addition, conventional practitioners perceive CAM modalities not only as costing people significant out-of-pocket expenses, but also as placing patients at significant risk because these treatments are most often unsupervised by physicians. Given the poor monitoring of these treatments, there may be much more risk than we recognize.

Alternatively, CAM and holistic practitioners reject the impersonal, fragmented, expensive, and risky care given by conventional medicine. Those embracing the new paradigm find the lack of mental-emotional-social-spiritual credence untenable, as much of modem health care emphasizes data and technology over the individual. Each year, hundreds of thousands of people die from invasive treatments because of a failure on the part of conventional medicine to recognize the healing power of the body. Collectively, the pharmaceutical industry and the institutionalized research bureaucracies narrow our view of medical treatment and human nature.

As you can see, much conflict and disagreement exists. Both sides could generate the zealous intensity of a medieval crusader. This degree of intensity could contain such a sense of threat and violation that it could transcend the issue and become personal rather than professional. Thus, in one camp would

reside the rigid, close-minded defenders of the status quo, and in the other camp, the idiosyncratic rebels who are determined to advance their cause by tearing down time-honored protocols and learning. Throughout history, significant scientific change has always generated heated conflict. How do we find the best of both worlds? Which common themes provide these two worldviews with a shared middle ground?

A common fundamental goal shared by all health practitioners is to relieve suffering and improve health. In doing so, we strive to do no harm, if possible. Most of us want to document the safety and efficacy of the treatments we choose to use. Ideally, we do all these things while respecting our patients and staying true to our moral philosophies. These shared goals and ideals reflect the principles of a healer.

However, conflicts arise from the differences inherent in the styles used to follow these common principles. For instance, modern science emphasizes the creation of knowledge chiefly through logic, precise research, and the isolation of variables. This represents deductive thought; it moves from general to the specific. Inductive reasoning, on the other hand, underlies much of holism and CAM. It moves from the specific to the general. Deduction effectively generates precise data and knowledge. Induction creates overview and wisdom. Neither is right or wrong; rather, they effectively counterbalance each other. As previously outlined, knowledge without wisdom can be misapplied; wisdom without knowledge can be vague and useless.

This polarity is not a spurious one; it is inherent in our cognitive structure. In the studies of cerebral laterality, these styles are well documented (Ornstein, 1998; Trevarthen, 1990). The left-brain tends to be linear and analytic; the right brain more holistic and contextual. Men are more lateralized in their use of the human brain; women are much less lateralized, thus bringing more right brain into application. This split-brain research earned Roger Sperry the Nobel Prize for medicine in 198 1.

Everywhere we look, we can see these complementary opposites. This is the foundation of Chinese philosophy, which underlies acupuncture - y i n and yang: male and female, dark and light, conscious and unconscious, hot and cold. The use of dualism also underpins Greek philosophy, which has had a pervasive impact on Western culture.

Gilligan's work (1993) describing female psychology centers on its relational (relationship-based) foundation. Male psychology accepts a more instrumental (goal-oriented) style. As is true throughout this discussion, neither polar extreme is right or wrong; both have value and importance. In some ways, conventional health care represents the epitome of deductive reasoning. It is a masculine system. Holism employs induction as a reaction to the extremes of conventional medicine. Holism and CAM modalities reflect a

feminine style. We need both. How then do we foster a union between the two mind-sets?

Carl Jung explored how polar extremes reflect a basic principle of the human psyche. Inherent in Jung's concept of psychic energy is the principle of opposites. Jung saw the tension in opposites as being similar to the principle of electricity, where energy flows because of the difference in charge. The more polar the opposites, the greater the charge, and the more potential energy they create (Whitmont, 1969).

Albert Rothenberg, MD, a non-Jungian psychiatrist, came to the same conclusion (June 1979). He undertook an intensive study of 54 creative people and found that creative achievement often flowed from an exploration of opposites. For example, Joseph Conrad conceived his novel Nostromo out of the awareness that a rogue could also be a person of character.

In Jung's view, we create higher awareness through the resolution of opposites in our psyche. We tend to limit ourselves psychologically by holding onto one extreme of a polarity. Overgeneralizations and their corrections also form the core of cognitive-behavioral therapy. Jung called this process of resolution "the transcendent function" (Mattoon, 1981). Rossi (1977) speculated that this might be a natural function of the integration of the left and right hemispheres. Perhaps the corpus callosum, which joins left and right cerebral hemispheres, serves to resolve this psychic polar tension. Frederic Schiffer of Harvard Medical School proposed that much of mental illness arises from trauma lateralized to one side or the other of the brain and left unresolved (1998). Julian Jaynes (2000), in a highly provocative book, argued that the origin of higher human consciousness occurred when we stopped operating two separate minds, which occurred 3000 years ago.

Jung called this marriage of opposites conjunctio - a conjunction or joining. Symbols help us to understand because they can represent opposites with a depth that words cannot. Jung's final work, Mysterium Conjunctionis (1963), published when he was 80 years old, explored the power and importance of this process in the creation of wisdom and spiritual depth.

Now we are faced with a relevant challenge. How do we marry the opposite styles of conventional medicine and holistic health care to create a higher ideal, a quantum jump in both the science and art of caring for people? This is not just about adding acupuncture or herbs to our treatment options. This marriage requires that we interweave the strengths of each style and recognize the value of both knowledge and wisdom, of both induction and deduction. We need to integrate these two styles more fully in every facet of health care. In this way, our work can be more fully conscious of the complexities found in each individual's body-mind-spirit.

Ultimately, more than health care is at stake. In essence, we are exploring and redefining fundamental human nature. As we create a new vision of who we are, our underlying premises will guide and inspire us. Caution seems reasonable as these assumptions can also limit us in many ways. Consider some possible, practical steps in our movement to a more integrated level of healthcare (Table 111).

Table III
Practical Steps to Integrated Health Care

Honor the need to balance high touch with high technology.

Provide a much stronger emphasis on mental/emotional and spiritual evaluation for all medical patients, especially those with chronic disease.

Support continued growth of CAM cumculum in medical schools.

Refocus on the personal (emotional and spiritual) development of all healers, not just didactic instruction.

Train practitioners in nonlocal medicine-the practice of prayer and intention.

Train practitioners in the power of support, suggestion, belief, and motivation.

Support the continued growth of research into CAM approaches sponsored by the National Institutes of Health Center for Complementary and Alternative Medicine.

Integrate training on simple practice feedback using health outcome studies in every professional training program.

Role model the deep value of retreat, reflection, and contemplation.

Build growing awareness of the debilitating power of unaddressed chronic stress by making stress reduction techniques such as relaxation, biofeedback, meditation, and massage as routine aspects of care for all chronically ill people.

Acknowledge the importance of the emotional development of children through affective education cumculum in schools.

Create a widely available Internet program for patient/client feedback on healthcare practitioners of all types.

Highlight the importance of education and empowerment in all healthcare settings.

Mandate and structure collaborative care and case coordination, especially for the chronically ill.

Enhance our attention to lifestyle issues such as diet, stress, isolation, and conflict in the treatment of chronic illness.

Create systems of social connection (even rehabilitation) for the treatment of chronic disease (as in Dean Ornish's Cardiac Program).

Establish a much stronger emphasis on mental health training for primary care practitioners.

Establish a much stronger emphasis on biological factors for nonpsychiatrists in mental health.

Foster a growing respect for the value of outcome studies which honor the open system nature of human experience and healing.

Routinely outline the body-mind-spirit status of patients/clients presented as case studies.

Create more European-style spas that combine the best of hospitals and health resorts.

Imagine a system of health care, a philosophy of human nature, that honors both knowledge and wisdom. It would support body-mind-spirit and yet feel comfortable in the application of high technology. People would be wisely treated as true individuals, with all that this entails, and our knowledge would guide broad direction. The power of the mind (supported with therapy and suggestion), the power of the body (supported with herbs, nutrition, and medications), and the power of the spirit (supported with inspiration and transcendence) could weave seamlessly together toward the shared goals of both patient and practitioner. Our training and our treatment strategies would emphasize commonalities more than separations. Technology and wisdom, sensitivity and data, would all interplay to the sound benefit of those who seek care. This is the health care system for which we all hope and strive. There is no controversy here.

VII. RESOURCES

Medical Outcomes Trust
198 Tremont Street
Boston, MA 021 16
Telephone: (617)426-4046
Website: www.outcomes-trust.org

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Appendix

Ratings

0. No research, no credible scientific theory.
1. Credible hypothesis or collateral support of wide clinical experience; needs pilot data.
2. Promising systematic data, but no prospective trial.
3. Promising prospective data lacking some important control or controlled trials with trends suggesting further exploration.
4. One significant double-blind controlled trial needing replication or multiple positive controlled trials in a treatment not easily blinded.
5. Convincing double-blind controlled evidence but needs further refinement for clinical application.
6. Solid, double blind, controlled evidence that is considered established treatment for the appropriate subgroup.

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